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ABSTRACT

Documents announced with VT numbers only in the Volume 6 Number 2 issue (VT 020 046) of "Abstracts of Research Materials in Vocational and Technical Education" (ARM) are included in this microfiche set. Microfiche availability for these documents is shown on the ARM resume as MF AVAILABLE IN VT-ERIC SET. The microfiche set is arranged in the following sequence: (1) a Vocational Technical (VT) number index to documents in the microfiche collection, (2) the subject and author indexes from ARM, and (3) the full text of documents listed in the VT number index. The texts are filmed continuously in VT number sequence. (DE)

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Microfiche Collection of Clearinghouse Documents

Reported in Abstracts of Research Materials in Vocational and Technical Education

(ARM)

Compiled and Indexed by the Center for
Vocational and Technical Education

Vol. 6 No. 2
1973

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VT 020 047

The Center for Vocational and Technical Education
The Ohio State University
1960 Kenny Road, Columbus, Ohio 43210

INTRODUCTION

This collection of microfiche consists of the documents which are announced with VT numbers only in Abstracts of Research Materials in Vocational and Technical Education (ARM), Vol. 6, No. 2, 1973. Microfiche availability is shown in the resume as MF AVAILABLE IN VT-ERIC SET. The documents are grouped in VT number sequence and filmed continuously as a microfiche set. These documents are not available on microfiche as individual items, but are obtainable only through purchase of this set, or from agencies who have this set and have the capability of reproducing microfiche. The microfiche set includes the following sections:

1. Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Vol. 6, No. 2, 1973.

2. Selected indexes from ARM, Vol. 6, No. 2, 1973.

   a. Subject Index
   b. Author Index

   The documents identified in the indexes with an ERIC Document (ED) number are usually available as separate documents from the ERIC Document Reporduction Service (EDRS). Information about EDRS Service can be found in ARM or Research in Education (RIE).[1] Items not available through EDRS will include a source of availability. The page numbers shown in these indexes refer to the locations of the abstracts in ARM Vol. 6, No. 2, 1973.

3. The full text of documents listed in the Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM Vol. 6, No. 2, 1973

[1] Research in Education is published 12 times a year. The first issue was no. 11, November 1966. Subscription: Domestic $38.00 a year; foreign $47.50. Single copy: Domestic $3.25. Send a check or money order (no stamps) to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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VT 014 960

MCCULLOCH, ETTA SMITH

ACCOUNTABILITY IN PRACTICAL NURSING EDUCATION.

MF AVAILABLE IN VT-ERIC SET.

PUB DATE - ND 53P.

DESCRIPTORS - MASTERS THESES; *PRACTICAL NURSING; *HEALTH OCCUPATIONS EDUCATION; CURRICULUM DESIGN; *EDUCATIONAL ACCOUNTABILITY; STUDENT SELECTION; *FOLLOWUP STUDIES; METHODOLOGY; TABLES (DATA); *EDUCATIONAL NEEDS; WORK ATTITUDES; VOCATIONAL DEVELOPMENT

ABSTRACT - AS PART OF A MASTER'S THESIS, THIS DESCRIPTIVE RESEARCH STUDY OF 297 GRADUATES OF 16 CLASSES FROM 1960 TO 1970 AT A PRACTICAL NURSING SC, (2) EDUCATIONAL BACKGROUND AS A SUCCESS FACTOR IN NURSING, (3) INCHOOL IN CENTRAL FLORIDA INTENDS TO PROVIDE INFORMATION USEFUL FOR CURRICULUM EVALUATION, DELINEATE AREAS WHERE CHANGES ARE NEEDED, CONSIDER STUDENT SELECTION POLICIES, STIMULATE FURTHER RESEARCH, AND RELATE FINDINGS TO FACULTY ACCOUNTABILITY FOR THE STATE EDUCATION DEPARTMENT. THE METHODOLOGY CONSISTED OF A 32-QUESTION COMPUTERIZED SURVEY QUESTIONNAIRE, DEVELOPED BY A NURSING ADMINISTRATOR AND A VOCATIONAL COUNSELOR, INFORMATION FROM A CLASS RECORD BOOK, INTERVIEWS, AND A PREVIOUS SURVEY. ANALYSIS OF DATA, PRESENTED IN TABULAR FORM, REVEALED: (1) AN URGENT NEED FOR CONTINUING EDUCATION OF PRACTICAL NURSESUNCLUSIVE EVIDENCE ON THE AGE FACTOR IN STUDENT SELECTION, AND (4) THE NECESSITY OF ROLE CLARIFICATION AND LIGHTENING OF WORK LOADS FOR JOB SATISFACTION. LEADERSHIP SKILLS, PSYCHIATRIC NURSING, EMERGENCY ROOM PROCEDURES, AND ADMINISTRATION OF MEDICATIONS NEED MORE EXTENSIVE COVERAGE IN THE NURSING CURRICULUMS. A SYSTEMS APPROACH IS SUGGESTED FOR IMPLEMENTING CURRICULUMS RESPONSIVE TO STUDENT NEEDS AND RELEVANT TO ACTUAL JOB SITUATIONS. A BIBLIOGRAPHY AND THE SURVEY QUESTIONNAIRE ARE INCLUDED. (AG)

VT 014 960

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Preface

Until you have measured it, you don't know
what you are talking about.
Lord Kelvin

This is a ten year follow-up, descriptive research study of the graduates of one School of Practical Nursing in Central Florida, which has been designed to measure the behaviors of the graduates as accurately as possible. High hopes and deep convictions should not be the only criteria for evaluating educational effectiveness and attainment. The study should reflect individual differences and similarities as they relate to the performance of practical nursing.

Analysis and synthesis of data will provide some insight into the logic and content of curriculum offerings. Areas where change is needed should become visible.

Since this study deals not only with physical phenomena, but also with diverse social and psychological components, isolating causative factors and measuring variables precisely is exceedingly difficult. It is to be expected that many persons may disagree with some of the author's viewpoints and hypotheses, but presentation of reliable facts cannot be refuted.

Identification of problems to be answered will be attempted by presenting the results of this survey, and logical analysis will follow.

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As Block points out, "misunderstanding of the present is the inevitable consequence of ignorance of the past."[1]

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To Dr. John Ingram, who has given constructive help with the total effort.

Sincerely,

Etta Smith McCulloch

[1]Marc Block, The Historians Craft (New York: Alfred A. Knopf, Inc., 1953).

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Introduction

Undertaking this descriptive research study into the activities and behaviors of graduates of Practical Nursing Schools is the result of a belief that these findings are of considerable importance to the members of the faculty of all practical nursing programs, to broaden and deepen their general fund of knowledge, improve their concepts of the real world for which they are preparing workers, and provide an opportunity for their professional growth. Society holds these teachers accountable for helping students become safe practitioners who are interested in the welfare of the individual patient as well as in their own professional growth in nursing. School administration holds these teachers accountable for the success or failure of the graduates.

Students hold these teachers accountable for selecting the learning experiences necessary for them to realize their aspirations and prepare them for nursing in the world of tomorrow. Hopefully, this study will help the teachers perform these services in a more enlightened manner and revitalize instructional procedures. It is also hoped that this study will shatter some entrenched pet ideas and attitudes and question some traditional practices regarding the depth of content in the curriculum, selection of learning experiences, and the means of assessing students' needs.

Willingness to appeal to facts for answers to problems rather than whims, habits, or expediency should increase teacher effectiveness and student achievement and create a more hopeful, healthful working climate.

Complacency has halted progress in nursing education and research findings have been seriously lacking. Dissemination of present research findings has been inadequate and utilization of that which is available has been hampered by inadequate inservice education of faculty members. This study will provide some evidence on which sound judgments for future nursing education practices may be based. Trial and error methods of seeking solutions are not in order today, nor is reliance on dogmatic authority which will result in stagnation.

Some of the motivating influences precipitating this study were questions voiced concerning student selection policies and curriculum content. In a youth oriented society, are we accepting too many students in the upper age range? Are those graduates working? Are we accepting too many educationally disadvantaged persons? Are we preparing too many LPN's for the job market?

Objectives

The objectives of this study are to:

1. Provide factual, valid information with which to help evaluate the curriculum, particularly concerning amount of time spent on obstetrics, pediatrics, administration of medications, psychiatric nursing, leadership skills, surgical and emergency room procedures, and depth of content.
2. Delineate specific areas where changes seem to be in order.
3. Consider student selection policies as they relate to behaviors of graduates.
4. Formulate questions for further research (utilization of

Licensed Practical Nurses).

5. Relate findings to accountability.

Assumptions

Behavior of graduate Licensed Practical Nurses as used here means the activities of these persons as they go about caring for patients, their satisfactions, their eccentricities and their job attitudes which are the result of situational factors, interaction of working conditions, educational and environmental influences.

Assumption I. These behaviors relate to the curriculum offerings as well as to the individual's background and motivation.

A. General classes of graduate LPN behaviors fall into clusters characterized by substantial intercorrelation within a cluster.

B. The major clusters of behaviors have the characteristics of dimensions.

C. Reliable estimates of graduates' behavior may be obtained through use of objective data gathered in some systematic manner.

D. The behavior of graduates is characterized by substantial stability over considerable periods of time.

E. The graduates' behavior is a function of the personal characteristics of the individual practitioner.

F. The graduates' behavior is a function of the general features of the situation in which it takes place.

G. The graduates' behavior is a function of the specific features of the situation in which it takes place.

Assumption II. These behaviors form the basis of an evaluation tool which the faculty may use to assess the effectiveness of its program offerings.

A. An implication here involves the belief that evaluation is a continuous process, which needs objective, rather than subjective concepts. Evaluation tools are very difficult to construct and use. Statistical data must be reliable and valid.

Assumption III. Certain curriculum changes may be needed and perhaps some changes were instituted which were ill advised.

A. There is an implied assumption that the reader recognize that certain facets of the curriculum are controlled by a legal body, the State Board of Nursing, which has certain regulations concerning the content of program offerings (i.e. most states require four weeks of pediatrics), which can only be changed by working through legislative channels, but many other changes could be made by faculty concensus

alone, which would improve the behavior of the graduates.

Assumption IV. School administration is now becoming aware of what students can offer the institution in the way of resources for the decision-making process and acknowledge that the student can and will accept responsibilities under the proper conditions.[2]

A. Most practical nursing students come to the program highly motivated and actively seek various learning experiences.

Most practical nursing instructors are concerned about the impact that one year of instruction has had on their students for several reasons. Some of these are:

1. Have the graduates been prepared to adjust to the real world of work in nursing?
2. Are they happy in their chosen work?
3. What kinds of nursing work are they actually doing?
4. Is the curriculum in need of adjustment?
5. Was the teaching been effective?
6. Are there jobs available and how often do they change jobs?
7. Do those that have the ability want to move upward or are they satisfied with their present limitations?
8. Has the quality of their life styles been improved?

Criteria for evaluating Schools of Practical Nursing have been developed by the Council for Practical Nursing Education of

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[2]Dr. David G. Robinson, "The Changing Student," Florida Education Tabloid, Vol. 49, No. 3 (October 1971), p. 14.

the National League for Nursing. Meetings of this Council reveal a wide variance in the philosophy of nursing educators concerning the preparation and utilization of these workers.

Many factors enter into the assessment of every School of Practical Nursing. Some of these which are not considered in this study, but which have bearing on the performance of graduates are:

1. Quantity and quality of supportive services to the program.
2. Cohesiveness in faculty attitudes and pratices.
3. Public relations.
4. Clinical facilities.
5. Physical facilities.
6. Instructional materials and library holdings.
7. Adaptability and flexibility of all concerned individuals.
8. Realism of the goals of the particular program.
9. Attrition rate.
10. State Board scores.

Summary

In essence, the group of graduates will chart its own course, concentrating on services it is able to provide, without diluting its energies in fruitless attempts to change health care systems. It is the responsibility of the faculty to determine the direction the group will take. Bedside nursing is the very core of nursing practice and we claim that we are preparing a bedside nurse, yet examination of results of this survey question, "Do you have patient assignments?" will cause doubt as to whether or not we are in fact preparing this type of practitioner as claimed.

The Nature of Practical Nursing

Practical nursing has existed since the beginning of time in one form or another, but modern day practical nursing came into existence in the late 1940's to help ease the critical shortage of nurses. The concept was to free the Registered Nurse for the more complex nursing situations by preparing a worker who could function in relatively stable situations, with a minimum amount of supervision. This gave impetus to the team concept of nursing. Today's practical nurse is becoming a respected member of the nursing team and most hospitals and nursing homes agree that they could not meet today's health care service needs without this group of dedicated persons.

In all settings, the community, hospital, nursing home, physician's office and private duty, practical nurses are teaching patients, families and others in informal ways. This is an important and recognized part of nursing care activities. Vocational schools have developed curricula to prepare a bedside nurse, but many employing agencies expect more expertise in these workers which gives rise to dissatisfactions within the job situations. The LPN is not only a bedside nurse - she is often placed in leadership roles for which her preparation was inadequate. Many employing agencies spend a considerable amount of money on each new employee not only for physicals and orientation, but also for extensive inservice education. For this reason they select their employees with regard to the probable length of time they will

serve the institution. Employee dissatisfactions then cause additional expense and become a part of the skyrocketing costs of institutional care.

Factors which are considered in this study then relate to:

1. Employment opportunities.
2. Types of job opportunities.
3. Salaries.
4. Shifts worked.
5. Job satisfactions.
6. Satisfaction with school - the prevailing concepts and attitudes that make up the educational environment in which the teaching-learning process takes place.
7. Job turnovers.
8. Professional growth desires.
9. Student selection policies, attrition rate.
10. Curriculum.

Background of School

This Practical Nursing School came into existance through the efforts of several dedicated practical nurses who formed the first Advisory Committee and exerted the necessary initiative to influence the Board of Education to provide this much needed community service. Funds from the Kellogg Foundation Grant were utilized to purchase the necessary equipment and the Vocational School was selected as the appropriate site.

Contractual agreements were written with various clinical agencies and have been renewed annually. The philosophy and objectives were written and have been revised periodically. The curriculum was designed to meet the stated objectives. The first class began October 5, 1960. The program is one year in length.

The foundation period utilizes approximately one-third of this time, the balance being spent in clinical experience. The total hours in the program has been lessened from 1760 hours in the first class to 1440 hours in the sixteenth class and is now 1285 hours. The school became an agency member of the National League of Nursing in 1962.

A table with some pertinent information has been prepared to enable the reader to have a clear picture of the program and its effectiveness and will be found on page 11.

The name of the school has been omitted since, in Florida, all of the practical nursing schools have been patterned after

the State Department of Education's Curriculum Guide for Practical Nursing Education. It is felt that there are only very minor differences in the learning experiences provided by each school. It is therefore assumed that similar studies would reveal similar findings and that these findings should be of use to each of the schools.

Table 1. Pertinent Information About the School

Class Number	Number Graduated	Percent of Attrition	State Board Failures	Average State Board Scores	Range of State Board Scores	Responded to Survey Percent	Non-respondents over 45 on Admission
1	16	11	0	543	405-666	50	0
2	14	30	0	586	405-666	71	0
3	15	6	2	516	315-635	46	1
4	13	23	0	543	405-647	54	0
5	14	18	0	545	362-650	64	2
6	24	11	0	520	381-666	54	2
7	27	4	1	550	338-690	81	1
8	23	23	0	548	361-694	61	0
9	27	13	0	586	405-746	70	0
10	38	15	2	513	330-658	63	0
11	29	9	2	526	326-681	60	1
12	36	19	1	566	286-729	61	1
13	41	23	2	507	286-666	56	3
14	59	14	2	529	264-713	57	3
15	59	8	3	538	264-774	57	4
16	61	15	4	515	248-676	57	1

State Board scores for the first five classes were converted from percentage scores to numerical scores using the conversion tables provided by the State Board of Nursing in 1963.

Total number of drop-outs - 87, of whom 19 were over 45 on admission to school, or 22%.

Methodology

A cover letter and survey form was mailed to each graduate of the program by a business education student who needed actual work experience for reference purposes. This delightful young lady devoted much time and effort in locating correct addresses of the graduates in order to minimize the expense of the project.

The cover letter was designed to alleviate any threat or hesitancy which the graduate might perceive in the questionaire. Each graduate had been personally known by the author and responses contained many personal letters and comments of an evaluative nature which will be summarized in this study. A copy of the cover letter will be found in Appendix I.

It was felt that hesitancy to respond to rather personal questions would be lessened if the respondents were not required to give their name. It is interesting to note that of 306 persons responding, only 16 persons decided to utilize that option (five percent). This fact has been interpreted as a "vote of confidence" for the instructional staff and will be discussed later in this study.

The questionaire was designed by the author with the assistance of the Vocational Education Guidance Counselor, Mrs. Margaret Nabors. The format was arranged to facilitate the compilation of results. A copy will be found in Appendix II.

The design of the tool took into consideration many psychological factors:

1. Perception of sharing the objective of improving "their"

school.

2. A non-threatening chance to express their real feelings toward the program and their job.
3. Perception of themselves as having value and of teachers representing friendly forces toward them.

The tool also contained a few structural defects of which the researcher was unaware until efforts to obtain a read-out were made. Question number twenty had four parts, each of which should have had an individual number. Each question was designed to enable evaluation of some recurring problem or suspicion of a problem and to attempt to determine what relationship might exist between student selection policies, curriculum offerings and job satisfactions.

The questions were placed in a logical sequence, proceeding from innocuous, simple ones to those which were more crucial and evaluative in nature.

The study was intended to serve as an instrument of accountability for the State Education Department, which it does, but data revealed and their cross variables were made difficult to obtain due to these structural defects. To prevent repetition of this fault, anyone attempting such a study is urged to seek the competent assistance of a data processing specialist before the questionaire stencil is cut, to eliminate these hazards.

As the questionaires returned, IBM cards were punched by a group of evening "Office Machines" students. Their teacher prepared the format and graded the students on their performance. Later, a

program for the computer was prepared and a frequency tabulation was made. The cross variables were itemized and contingency tables prepared to show the interrelationships desired for the study.

Scope

The study includes the graduates of sixteen classes of practical nursing students, from 1960 to 1970.

Total number of graduates	496
Unable to locate addresses of	46
Number of forms returned	306
Forms grossly incomplete	6
Forms received too late for inclusion in computerized data	3
Total number in computerized study	297

The class record book was then utilized to give additional pertinent data, to determine whether or not any bias could be found among the non-respodents. This search revealed no feature which was consistent and since 61.7 percent of the universe responded, it must be conceeded that the data revealed is indeed a representative sample.

Since the study was intended to be used as an evaluation of the total program, many personal interviews were conducted to shed enlightenment on the answers to questions number 21, 22 and 23.

The follow-up survey of 1965 was then utilized, to attempt to discover whether five additional years of practical nursing experience had, in any significant way, changed the behaviors or attitudes of those responding to both surveys.

Responded to both surveys	70
Responded to 1965 survey only	33
Responded to 1970 survey only	236
Total graduated to date of 1965 survey	146
Percent of response to 1965 survey	70

About the Author

The author is a graduate of the Mount Sinai Hospital School of Nursing in New York. Her experience background includes seventeen years as an Administrator and Director of Nursing Service and twelve years of teaching experience. She was employed by the Board of Public Instruction to begin this program in 1960. In 1964, she was appointed as Head of the Department of Health Occupations Education, in which capacity she served until September 1970. This paper has been prepared as a Directed Individual Study in Educational Research, which is a part of her Master's Degree Program of Study at Florida State University.

Rationale and Findings

"Don't judge a book by its cover!"

1. Present age: (a) 19-25 (b) 26-30 (c) 31-35 (d) 36-40
   (e) 41-45 (f) 46-50 (g) 51-55 (h) over 55

The question of age is frequently presented as a criticism of practical nursing. This problem has been "cussed and discussed," as it relates to many behaviors. It has, therefore, been analyzed extensively in this study and presented with many cross variables in tables 2 and 3, pages 17 and 18.

These same tables show the frequency count and percentage of responses by age groups, to questions number 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 20, 21, 22, 23, 24, 28, 29, and 30. The questions numbered above twenty have been re-numbered to allow for computer program analysis. These new numbers appear in red on the copy of the survey form found in Appendix II and will be used throughout the remainder of this paper.

2. Date of graduation. Month and year.

The findings are reported in Table 1, page 11. This question was asked to provide an estimate of the length of time the graduate had worked to help evaluate her responses.

3. Are you licensed in Florida?
4. Are you licensed in state other than Florida?

These are shown on page 19 and were asked to assess the migratory nature of nurses.

Table 2. Responses by Age Groups for Questions 5 Through 12

# Age Groups			19-25	26-30	31-35	36-40	41-45	46-50	51-55	55.
# Persons			70	39	30	33	38	43	38	14
% Respondents	No.	Pct.	23.7	13.2	10.2	11.2	12.9	14.6	9.5	4.7
5 Working as LPN	230	78.0	75.7	74.4	76.7	72.7	81.6	76.7	89.3	85.7
Not Working as LPN	65	22.0	24.3	25.6	23.3	27.3	18.4	23.3	10.7	14.3
6 Employed When Desired	285	98.0	95.7	97.3	100.0	97.0	100.0	100.0	96.4	100.0
Not Employed When Desired	6	2.0	4.3	2,7	0.	3.0	0.	0.	3.6	0.
7 Working Other Than LPN	17	5.8	5.7	2.6	10.0	9.1	5.3	9.5	0.	0.
Not Employed Other Than LPN	276	94.2	94.3	97.4	90.0	90.0	94.7	90.5	100.0	100.0
8 Employed in:										
Hospital	177	69.4	69.4	69.0	68.0	76.9	68.6	65.8	73.1	64.3
Nursing Home	29	11.4	14.5	17.2	8.0	7.7	5.7	7.9	15.4	14.3
Dr. Office	20	7.8	8.1	6.9	16.0	3.8	8.6	10.5	3.8	0.
Private Duty	15	5.9	1.6	3.4	0.	7.7	11.4	7.9	7.7	14.3
Other	14	5.5	6.5	3.4	8.0	3.8	5.7	7.9	0.	7.1
9 Hospital Size:										
Under 50 Beds	15	6.8	14.0	0.	0.	8.3	10.0	0.	4.3	10.0
51-99 Beds	27	12.2	7.0	14.3	15.8	12.5	0.	10.0	30.4	30.0
Over 100 Beds	179	80.5	79.0	85.7	84.2	79.2	90.0	90.0	65.2	60.0
10 Employed:										
Less than 3 Mo.	20	8.1	10.2	16.7	4.3	12.0	5.7	2.8	8.0	0.
3 - 6 Mo.	30	12.2	18.6	6.7	4.3	20.0	8.6	11.1	12.0	7.7
6 - 12 Mo.	45	18.3	16.9	20.0	26.1	12.0	20.0	11.1	28.0	15.4
13 - 24 Mo.	63	25.6	30.5	33.3	17.4	28.0	22.9	27.8	16.0	15.4
Over 2 Years	88	35.8	23.7	23.3	47.8	28.0	42.9	47.2	36.0	61.5
11 Area of Work:										
Med.-Surg.	126	62.7	57.1	58.3	58.8	52.0	65.5	81.5	66.7	66.7
Obstetrical	12	6.0	8.2	8.3	5.9	8.0	6.9	0.	0.	11.1
Pediatric	9	4.5	2.0	0.	0.	20.0	6.9	0.	4.8	0.
Nursery	2	1.0	0.	4.2	0.	4.0	0.	0.	0.	0.
Other	52	25.9	32.7	29.2	35.3	16.0	20.7	18.5	28.6	22.2
12 Morning Shift	82	34.0	29.5	34.5	45.0	29.6	36.4	38.2	45.8	7.7
Afternoon Shift	67	27.8	34.4	24.1	15.0	22.2	12.1	32.4	33.3	53.8
Night Shift	43	17.8	13.1	27.6	20.0	22.2	30.3	8.8	8.3	15.4
Rotating Shift	42	17.4	21.3	10.3	10.0	25.9	21.2	17.6	12.5	7.7
Other	7	2.9	1.6	3.4	10.0	0.	0.	2.9	0.	15.4

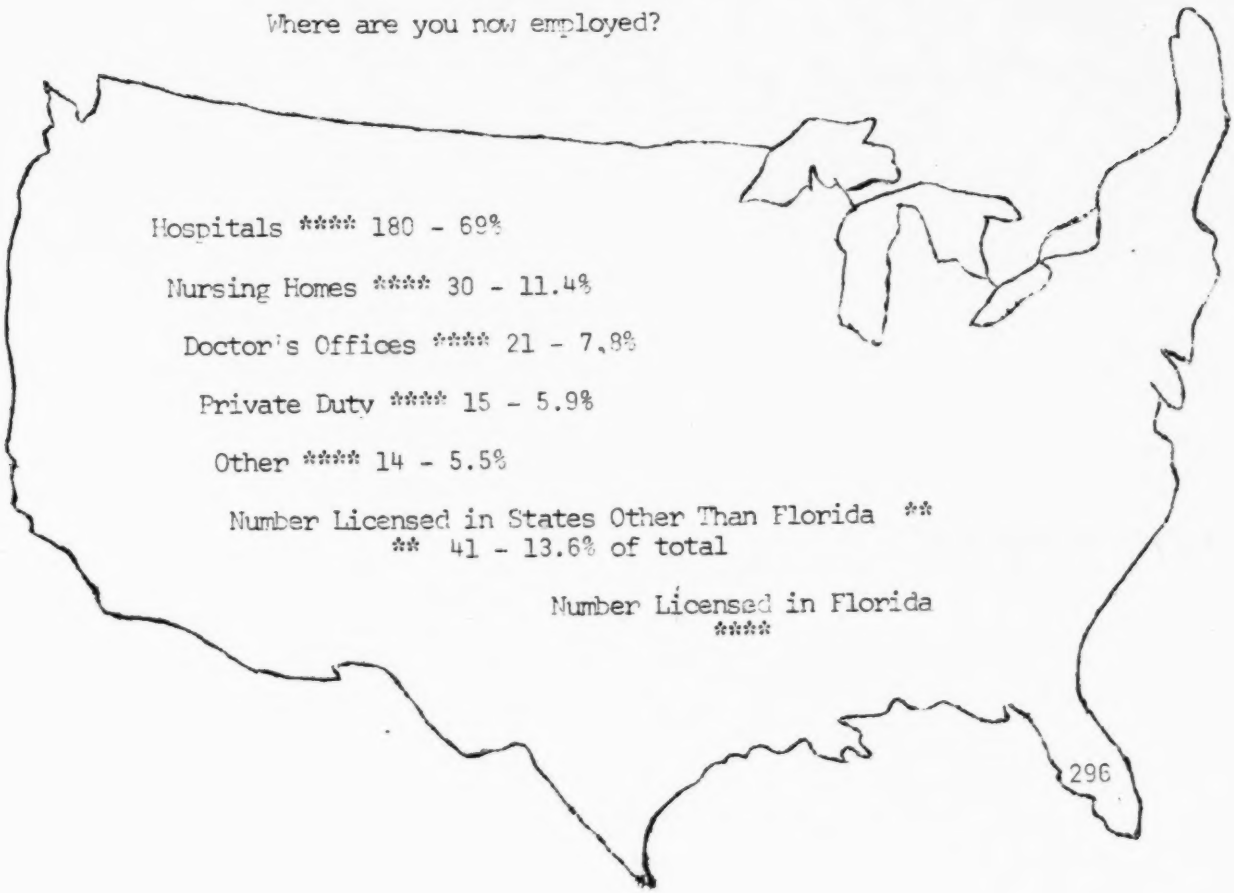
Table 3. Responses by Age Groups for Questions 16 Through 30

# Age Groups			19-25	26-30	31-35	36-40	41-45	46-50	51-55	55
# Persons			70	39	30	33	38	43	38	14
% Respondents	No.	Pct.	23.7	13.2	10.2	11.2	12.9	14.6	9.5	8.7
16 Medications:										
Oral	5	1.9	3.2	0.	0.	3.2	2.9	0.	3.7	0.
Intramuscular	3	1.1	1.6	3.1	0.	0.	2.9	0.	0.	0.
Both	240	92.0	87.1	93.8	96.0	90.3	88.5	97.2	92.6	100.0
None	13	5.0	8.1	3.1	4.0	6.5	5.7	2.8	3.7	0.
17 Patient Assignment: Yes	131	56.4	54.4	41.4	45.0	66.7	54.8	67.7	62.5	60.0
No	101	43.6	45.6	58.6	55.0	33.3	45.2	32.3	37.5	40.0
20 Personal Satisfaction With Nursing: Yes	273	96.8	95.4	94.4	100.0	97.0	97.3	95.0	100.0	100.0
No	9	3.2	4.6	5.6	0.	3.0	2.7	5.0	0.	0.
21 Satis. With Salary: Yes	204	78.5	65.6	83 9	82.1	78.8	87.9	75.7	88.0	83.3
No	56	21.5	34.4	16.1	17.9	21.2	12.1	24.3	12.0	16.7
22 Satis. With Working Cond.: Yes	215	82.7	77.8	74.2	84.6	81.8	93.5	75.7	96.2	92.3
No	45	17.3	22.2	25.8	15.4	18.2	6.5	24.3	3.8	7.7
23 Satis. With Opportunities: Yes	234	90.0	81.3	90.9	92.6	93.9	93.3	91.4	92.3	100.0
No	26	10.0	18.7	9.1	7.4	6.1	6.7	8.6	7.7	0.
24 Satis. With School: Yes	291	95.1	91.0	94.7	96.7	97.0	97.3	97.5	92.6	92.8
No	15	4.9	9.0	5.3	3.3	3.0	2.7	2.5	7.4	7.2
28 Desires Further Education: Yes	159	58.5	67.6	61.8	77.8	60.7	40.0	59.5	42.3	18.2
No	113	41.5	32.3	38.2	22.2	39.3	60.0	40.5	57.7	81.8
29 # Job Changes:										
0	126	46.7	43.5	36.1	53.1	45.2	52.9	51.4	44.4	53.8
1	48	17.8	14.5	11.1	26.7	25.8	20.6	10.8	22.2	15.4
2	47	17.4	14.5	25.0	13.3	16.1	11.8	27.0	11.1	23.1
3	24	8.9	14.5	11.1	3.3	9.7	8.8	5.4	7.4	0.
4	11	4.1	4.8	8.3	3.3	3.2	0.	2.7	7.4	0.
5	8	3.0	3.2	8.3	0.	0.	2.9	2.7	3.7	0.
6	2	0.7	0.	0.	0.	0.	2.9	0.	0.	7.7
7	1	0.4	1.6	0.	0.	0.	0.	0.	0.	0.
8	2	0.7	1.6	0.	0.	0.	0.	0.	3.7	0.
9	1	0.4	1.6	0.	0.	0.	0.	0.	0.	0.
30 Member NFLPNA	67	23.5	11.8	8.1	10.0	12.1	40.5	41.0	50.0	35.8
Non-member	217	76.5	88.2	91.9	90.0	87.9	59.5	59.0	50.0	64.3

Table 4. Where Licensed and Working

Survey Questions #3, 4, and 8 -

Where are you now employed?



Ten persons no longer hold Florida Licenses, but have them in other states and are working.

Questionaires were returned from Germany, England, Canada, Hawaii, Alaska and many other states.

5. Are you currently employed as a Licensed Practical Nurse?

This was asked to justify the existance of the program. It was answered on 295 forms. Of these, 230 (78%) are presently employed as LPN's, 65 (22%) are not. Of the 65 not working as LPN's, interviews reveal that:

11 are pregnant or caring for small infants;

4 are Registered Nurses, so employed;

10 are in RN training;

10 are ill;

17 are working in other occupations;

2 are in foreign countries;

11 do not want to work for various reasons- salary, family problems, etc.

6. Have you been continuously employed as an LPN whenever desired?

(a) yes (b) no

This question was asked to determine whether or not we are "flooding the market" with our product. There were 291 responses. Employed whenever desired - 285, negative response - 6. Of the six who answered "no":

2 are pregnant;

1 is in RN training;

1 had not passed State Boards;

1 was living in a state in which she was not licensed;

1 is doing private duty, but complaining because of an insufficient amount of work.

7. Have you been employed in an occupation (s) other than Practical Nursing since graduation? (a) yes (b) no

This information was sought to assist in determining the effectiveness of the program in meeting the employment needs of the graduates. There were 17 persons who indicated they have worked in occupations other than practical nursing since graduation, 276 have not. Interviews with those answering 'yes' revealed that four are now registered nurses, one is a nursing home administrator, one is a surgical technician, one is working in an orthopedic clinic, one is working as an industrial nurse, one is a police woman, one is in real estate, one is an insurance adjustor, one is managing her husband's restaurant, one is managing her husband's grocery store and delivery business, one is a cosmetics demonstrator and three are homemaking.

From this data, it would appear that the practical nursing instruction was not wasted in most instances, even though the individual is doing something other than practical nursing.

8. Where are you now employed? (a) hospital (b) nursing home (c) doctor's office (d) private duty (e) other

This question was asked to determine the type of employment and its relatedness to questions one and ten. The findings are reported in Table 2 and Table 5 and shown on pages 17 and 22.

Where Employed	Hospital	Nursing Home	Doctor Office	Private Duty	Other	Total
Number Persons	177	25	19	13	9	243
Less than 3 mo.	7	5	3	3	2	20
3 - 6 mo.	20	4	2	1	2	29
6 - 12 mo.	31	7	4	0	3	45
13 - 24 mo.	51	4	2	5	0	62
Over 2 years	68	5	8	4	2	87

The number of persons in this Table will be seen to differ slightly from the number indicated in Table 2 because not all persons answered both questions.

Table 5. Where Employed and How Long

9. Size of employing institution if applicable: (a) fewer than 50 beds (b) 51-99 (c) 100 or more beds

This question was asked to determine what relationship, if any, size of the institution had to:

1. Salary (question 14)
2. Giving medications (question 16)
3. Patient assignments (question 17)
4. Size of assignments (question 18)
5. Personal satisfaction (question 20)
6. Salary satisfaction (question 21)
7. Satisfaction with working conditions (question 22)
8. Satisfaction with employment opportunities (question 22)

Table 6 shows frequency count, frequency percentage and variable percentages for each size institution. Findings of interest here indicate that salaries in larger institutions are in general higher, but there is less personal satisfaction with the practical nursing occupation. The percentage of those who do not have patient assignments is greater in smaller institutions.

10. How long have you been with present employer? (a) less than 3 months (b) 3-6 months (c) 6-12 (d) 13-24 (e) two years or more?

This question was asked to determine whether or not the graduates were flitting from job to job, or if they are stable employees. This information has many ramifications.

Question Number	Size of Employing Institution	Under 50 Beds	51-99 Beds	Over 100 Beds
	Frequency Count	14	28	184
	Frequency Percent	6.0%	12.0%	82.0%
14	Salary -$300-$400/month		4.0%	1.3%
	$400-$500/month	84.6%	32.0%	23.9%
	$500-$600/month	15.4%	64.0%	74.8%
16	Medications-Oral Only	7.1%		2.3%
	Intramuscular Only			.6%
	Both	92.9%	100.0%	89.7%
	None			7.4%
17	Patient Assignments-Yes	38.5%	40.7%	61.5%
	No	61.5%	59.3%	38.5%
18	Number Patients Assigned- 5-10	16.7%	33.3%	43.2%
	11-20	50.0%	26.7%	31.5%
	over 21	33.3%	40.0%	25.2%
20	Personal Satisfaction-Yes	100.0%	100.0%	97.2%
	No			2.8%
21	Salary Satisfaction-Yes	63.6%	82.6%	80.5%
	No	36.4%	17.4%	19.5%
22	Working Conditions Satisfaction Yes	92.3%	91.7%	80.0%
	No	7.7%	8.3%	20.0%
23	Employment Opportunity Satisfaction-Yes	92.3%	95.8%	90.6%
	No	7.7%	4.2%	9.4%

Table 6. Size of Employing Institution with Cross Variables

The findings are shown in Table 5. Two-hundred and seventy persons answered the question. Of these, 46.7% have never changed jobs, 17.8% changed jobs one time, 17.4 changed jobs twice, 8.9% changed jobs three times and 4.1% four times. The remaining 5.2% have changed jobs relatively often. Each of the last 5.2% explained this behavior as having husbands in service or frequent moves because of husband's occupation.

11. If employed by hospital, on which of these services do you usually spend three-quarters of your time? (a) medical-surgical (b) maternity (c) pediatrics (d) nursery (e) other

This was asked to help determine if curriculum changes should be considered. Findings are reported in Table 2 and will be discussed in a later chapter.

12. On which shift do you usually work? (a) morning (b) afternoon (c) night (d) rotating (e) other

This also has implications for curriculum content. Frequency count revealed that 84 persons work mornings, 69 work afternoons, 46 work nights and 43 work rotating shifts.

13. What was your beginning monthly gross salary (approximately)?

14. What is your present monthly gross salary (approximately)?

These answers reveal a wide range in salaries, from a beginning salary of $125.00 per month for full-time employment, to three who reported presently earning over $800.00 per month (two private duty and one nursing home administrator). Many persons chose to omit the answer to this question.

15. Each week you work (a) 5 days (b) 5½ days (c) 6 days (d) more?

This question was asked to help evaluate answers to questions 13 and 14. Of the 240 persons responding, 186 work five days, 3 work five and one-half days, 15 work six days and 36 work more than six days.

16. Do you give medications? (a) oral (b) intramuscular (c) both (d) none

17. Do you usually have patient assignments? (a) Yes (b) No

18. If applicable, how many patients? (a) 5-10 (b) 11-20 (c) 21 or more

These were asked to help evaluate curriculum content. Findings are reported in Table 6, page 24 and will be considered later.

19. If applicable, how have you secured private duty? (a) registry (b) hospitals (c) other nursing bureau

Fifteen persons reported in question eight that they are doing private duty, however it is known that many staff nurses are asked to fill this need by doing a double shift or private duty on their days off. Many nurses find it necessary to supplement their income in this manner. The findings are as follows: registry - 25; hospitals - 19; nursing bureau - 2; other source - 3.

20. Has your work in nursing met your expectations in terms of personal satisfaction? (a) yes (b) no

This, the ultimate goal of every school, revealed that 273 persons find nursing has met their expectations in terms of personal satisfaction, 9 have not. Reasons given on interviews with these persons were as follows:

#1. Salary insufficient for family's need

#2. Interpreted this four part question to require a single answer. Is happy in nursing and doing a fine job, but feels that salary is not commensurate with job responsibilities. She is often placed in charge of a hospital unit, or has an assignment of 15-20 patients for total care.

#3. Felt limited in practical nursing and is now a Registered Nurse.

#4. Also interpreted the question to require only one answer and could not say "yes" to working conditions.

#5. Misinterpreted question. Felt she was doing an RN's work for a low salary.

#6. Loves nursing, but has developed a physical handicap (post-encephalitis epilepsy) and has difficulty holding a job. She had the encephalitis before entering the program, but the epilepsy did not develop until two years ago. She feels that employers are not empathetic enough with handicap and stated that her siezures are under control with medication. This is the young lady who reported

nine job changes. Her husband is in service and they have moved often.

#7. Enjoys nursing, but cannot tolerate seeing patients receive poor care due to excessive assignments.

The two other persons did not give their names, so could not be interviewed.

21. Has your work in nursing met your expectations in terms of salary? (a) yes (b) No

22. Has your work in nursing met your expectations in terms of working conditions? (a) Yes (b) No

23. Has your work in nursing met your expectations in terms of employment opportunities? (a) Yes (b) No

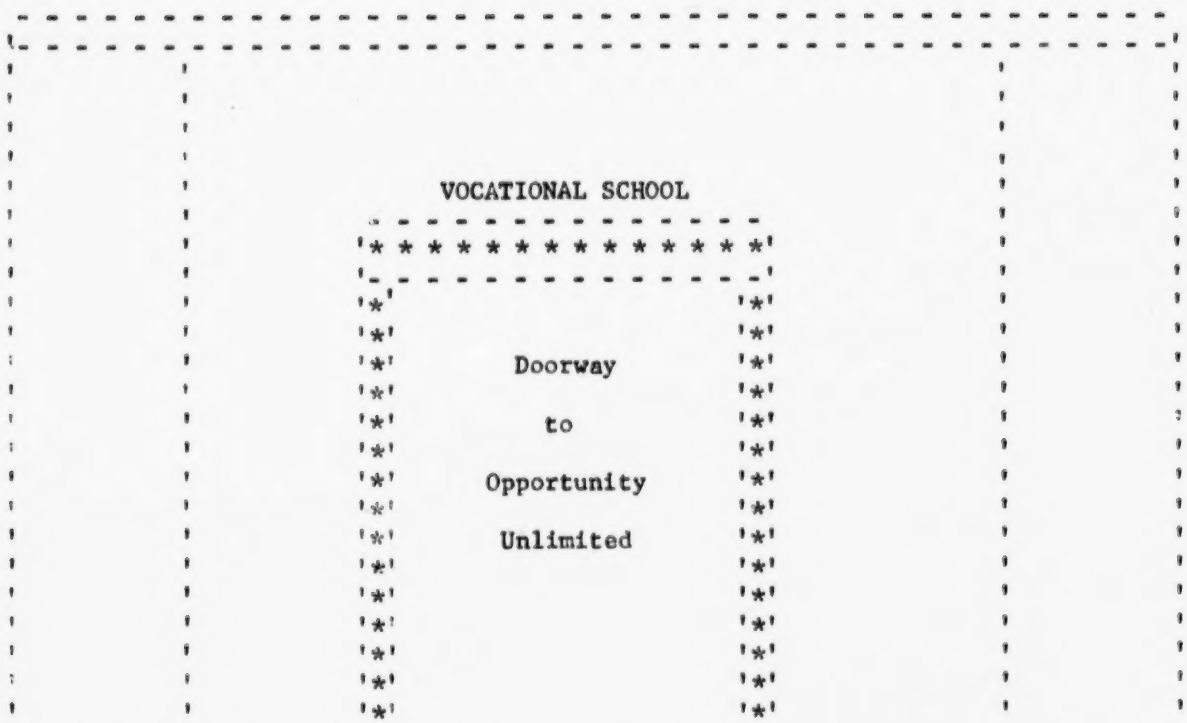
These findings are reported in Table 6, page 24 and have implications which will be discussed later.

24. Did the curriculum offerings of your training meet your need as a beginning licensed practical nurse? (a) Yes (b) No

This question is probably the most significant of all for the purposes of this study. The findings are reported in Table 7, page 29. The fifteen negative responses include eight who omitted the answer to the question. The comments of the seven who actually said "no", are as follows:

#1. (graduated in September 1968) "I went to work in a nursing home and had to do a male catheterization which I had never seen."

#2. (graduated in October 1961) "I think each student



Original Numbers on 1970 Survey - # 21, 22, 23, 24, now numbered:

		Yes	No
24.	Did curriculum offerings of your training meet your needs as a beginning practitioner?	291	15
25.	Too much theory?	19	275
26.	Too little theory?	38	249
27.	Have you attended any formal education program since graduation?	97	197

Table 7. Doorway to Opportunity

needs to know how important it is to really study hard and learn all she can. Spelling and good knowledge of terms is most important. Each student needs to know how to smile." (This same student had answered the same question on the 1965 survey in the affirmative)

#3. (Graduated in September 1966) This graduate answered 'yes and no.' but it was counted as a negative answer. "Leave off the Civil Defense program. Do many more dressings, PO and IM medications. Charting was a big problem. I didn't know what to chart or how to spell it. The term paper took up a lot of good time that could have been spent otherwise. The girls need to work the ER and Surgery. In a small hospital, an LPN does everything and it helps if you have at least seen it one time and know how to set up, etc. Stress professional attitude! Know when to speak and when to be quiet!"

#4. (Graduated in September 1969) "I feel the curriculum offerings did not meet my needs as a beginning LPN because I went to work on isolation and I did not have enough isolation training. I feel I could have used more training in this field."

#5. (Graduated in September 1969) "The class I attended was much too large. Some of the teachers had different opinion[s] on instruction of students. More organization of staff need[ed]. Starting in the Doctor's office, I

felt very insecure. For me, I am very fortunate to be working for a doctor who has patients [sic] and understanding and has taught me very much, such as taking x-rays and doing laboratory work."

#6. (Graduated in January 1969) "I was under the impression that LPN's were not to be charge nurses. Everywhere I go, LPN's are put on floors as charge nurses, sometimes without RN supervision. We need to be taught more of supervising and being in charge of floors. I also believe classes should be made longer (1 1/2 - 2 years) and there should be less students in a class or more teachers to take on [sic] or teach smaller groups."

#7. (Graduated in September 1969) "A more advanced course on Drugs and Solutions. Needed more instructors for the amount of students enrolled. The shortage of instructors short changed some students in the training they needed for being a licensed practical nurse."

Were these persons given adequate guidance in identifying the relationship of their learning experiences to the behavioral objectives of the program? Are the goals of the program realistic?

25. Do you feel that the curriculum offerings contained too much theory? (a) yes (b) no

26. Do you feel that the curriculum offerings contained too little theory? (a) yes (b) no

27. Have you attended any formal education program since graduation? (a) yes (b) no

28. Do you plan on furthering your education in nursing? (a) Yes (b) no

Selection of appropriate careers required two types of knowledge: self-knowledge - assessment of one's skills, aptitudes and learning capabilities; and job knowledge - a combination of skills required for successful performance, shifts in employment opportunities and projection for new careers or knowledge of alternatives.[3]

Vertical worker mobility has been slow to develop in the health field. There is an attempt to develop career ladders and lattices and to improve coordination among programs.

Of the 306 respondents, 159 plan on furthering their education in nursing (fourteen of whom are already in RN school), 113 do not. Of the non-respondents, it is known that fifteen have completed RN training (twelve Associate Degrees, two B.S. Degrees and one Diploma School) and are employed as Registered Nurses.

29. How many times have you changed positions since graduation?

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[3]Joseph E. Hill and Derek M. Nunney, "Career Mobility Through Personalized Occupational Education," American Vocational Journal, Vol. 46, No. 7 (October 1971), p. 36.

30. Are you a member of your local practical nurse association division? (a) yes (b) no

These findings are reported in Table 3, page 18.

31. Comments: Please be specific in any suggestions or criticisms. We need <u>your</u> reactions.

As educators become more aware of the contribution which students can make in the design of their program, more attention will be paid to comments such as these found in this study. There were 196 comments received and 110 forms received without any comment.

Of the 196 comments, 121 indicate great pride in their school regarding curriculum and instructors, as well as pride in comparing their knowledge and ability with graduates of other schools with whom they have worked. Many of these expressed concern about need for a career ladder, as they are motivated to continue nursing education. Of the remaining 75, three were frankly critical of the instructional staff; thirteen expressed dissatisfaction with working conditions (patient load and responsibilities beyond preparation); thirty believe that more time should be spent on pharmacology; eleven expressed concern over teacher-student ratio (classes too large, too few teachers); eight persons think the material to be covered needs a three or four month extension to the program; five persons felt the need for clinical experience in the emergency room; seven were critical of the amount of

time spent on history of nursing, dietetics, mathematics, civil defense, term papers, etc.; eight believe there should be more psychiatric instruction and leadership skills; two believe that some instruction in cardiac care should be included; and nine express need for more extension courses, better books, experience on all shifts, more isolation techniques, more charting, heavier student assignments during last month in clinical area and career ladders which allow credit for LPN training.

32. What, if any, scholarship assistance did you receive? Describe:

The Florida State Department of Education, Scholarship Loan program awarded 32 of the respondents $300.00 each, the loan being repaid by working one year in the State of Florida. Altrusa International provided six Founders Fund Vocational Awards on the basis of need. Vocational Rehabilitation sponsored three persons. Fifteen others received help, on the basis of need, from twelve other sources.

One final comment from a graduate to summarize this chapter: "Next to my marriage, this course was the best thing that ever happened to me!"

Analysis of Data

A story is told that once upon a time a scientist was studying the behavior of trained fleas. He removed a right leg and told the flea to jump. It jumped towards the right. He then removed another leg, whereupon it jumped again when told to, and each time he removed a leg the flea jumped when told to do so. Finally he removed the last leg and told the flea to jump. Since it did not respond, he summarized his experiment by saying that removal of all legs damaged the flea's ability to hear. Hopefully, the following material will not be this absurd and fallacious.

Abridgement, condensation, and selection of pertinent data for analysis from the mass amount of material available in this study has been purely subjective.

Implications for change of student selection policies concerning age and educational background are reflected in this study. The age of the graduate then becomes the first subject for discussion. Of the nineteen who failed boards, only one was over fifty, while eight were in the 19 - 25 age group. The school's attrition rate, while low, was increased by the dropping of nineteen of those who were over 45 on admission to school, yet this number comprised only 22% of the total attrition rate.

Data revealed in this study do not actually support justification for any change in the existing policies concerning age of applicant. Based on Table 2, we see that a greater percentage of those in the upper age brackets are working as LPN's and that work

is available for them. They have not deserted the occupation (which in this author's opinion indicates motivation and devotion). Recognizing the nature of practical nursing, it is surprising that we find more than 64% of those over 40 are working in hospitals and that 60% of those have patient assignments which are very large. The over 55 age group, although few in number, are markedly stable employees, 61.5% having worked over two years at the same job, and 53.8% have not changed jobs even one time since graduation. They are working on all shifts, but 53.8% are working the least desirable hours - 3P.M. to 11P.M. 100% of them are giving both Oral and Intramuscular medications and 100% report that their work in nursing has met their expectations in terms of personal satisfaction and employment opportunities. Their responses to the question concerning satisfaction with school indicate that they feel that more emphasis should be placed on administering medications, psychiatric nursing concepts and emergency room nursing. Only 18.2% indicate that they are desirous of becoming RN's, implying that they believe it would not be worth the effort to them. Over one-third belong to their professional organization. This is related to many factors:

1. This is required if they are doing private duty nursing.
2. Financial state of family.
3. Interest or desire to be a part of the policy-making group for their occupation.

Data revealed in this study has implications for selection policies concerning educational background as a potential for

success in nursing. Of the 306 respondents, over 62% were high school graduates, and of these, a large percentage indicate that they wish to further their education in nursing. An accurate figure could not be obtained in this study because nine of these who chose not to give their names indicated they wished to further their nursing education.

Very probably some of them should have been channeled into an associate degree program to start with, rather than now finding that there are virtually no programs which will allow them suitable credit for the 1400 hours they have already put into preparation for nursing. Many of these persons entered the practical nursing program because they were denied admission to an RN school, or because they had discontinued, or been dropped from registered nurse programs for one reason or another.

The data supports the hypothesis that selection policy changes are in order if more than half of the graduates are not considering this program as a terminal education endeavor. Within nursing, this is an acute problem because each level of program is considered to be a terminal one for the majority of its graduates, yet it must prepare some to proceed expeditiously to the next level of attainment.

As science and technology continue to change the nature of health care, emphasizing more specifically the provision of quality care, it is often stated that "Nursing" must immediately take responsible action to see that a sufficient quantity of properly prepared persons become available to meet the needs of

this nation. The Surgeon General's report in 1960, the report of the National Commission on Nursing and Nursing Education in 1970 and the reports of many other studies of nursing and nursing education all concur that the most urgent need for provision of quality health care services depends upon a substantial increase in the number of Registered Nurses. We must find ways to provide continuing education for LPN's!

The data also supports the hypothesis that practical nurses are dissatisfied with the ways they are being utilized and that their ability to give good patient care is being hampered, partly because nursing education and nursing service are worlds apart, and partly because their role on the health team is unclear. The personal satisfaction with nursing, which the graduate relates to patient care and her ability to provide good care, is being eroded in the clinical situation when she is assigned to total care of over twenty patients, twelve of whom are in need of complete bed baths and being fed! According to Dr. Jerome P. Lysaught, these intrinsic rewards are more important to nurses than greater pay and this author heartily concurs with that belief.

Implications for Curriculum Changes

In the final analysis, every faculty should identify the specific activities which produce behavioral changes in the students and which prepare the graduates for their jobs. They must also analyze the needs and requirements of the occupation and identify the skills which the graduates will need for successful performance. The problem of timing is critical in all phases of program planning and implementation. What is done is no more important than when it is done. Many faculties use two general approaches to develop the specific, effective components of the curriculum. The first approach involves initially selecting and combining a variety of experiences which seem to be rational for producing desired results. The subtractive strategy is to drop out individual components and assess the effect of their absence. Those experiences which can be left out without lowering performance are deleted and the curriculum program eventually contains only those items which are necessary for effectiveness.

The second approach is essentially additive and starts with a limited set of activities and gradually adds those which are thought to increase effectiveness. While it is understood that these methods are not particularly educationally sound, because of a lack of research, faculties have had no tools to measure the effects of specific experiences.

Present day research indicates that many schools are using a systems approach to curriculum development. Once the job is

analyzed, performance (behavioral) objectives will be formulated, and educational strategy to meet the objectives developed, implemented and continuously assessed. Selection criteria will be established so that competencies the students have and competencies needed by the occupation will match. Inherent in this approach to curriculum development is the selection of appropriate teaching methods to meet the individual student's style of learning. Also inherent in this approach is provision for re-cycling the student who learns more slowly, or has special needs. It is unrealistic to expect every student to arrive at the desired level of achievement in exactly the same time. It is perhaps important to mention here that of the nineteen State Board failures (4% of total number of graduates to date) reported in this study, 31.5% were white, 68.5% were non-white. This entire group obviously needed different methods and materials to meet their needs.

This study seems to indicate that certain curriculum changes are in order. For example, with only 6% of the respondents working in obstetrics, is six weeks of obstetrical clinical experience justified? With only 4.5% working in pediatrics, is four weeks of clinical experience justified? With 92% giving both oral and intramuscular medications and with many of the comments relating to desires for more medication administration instructions, should this area of instruction not be broadened and deepened?

Consideration of the total number of respondents who do not have patient assignments (101 persons, 43.6%) indicates that if we are in fact gearing curriculum toward preparation of a bedside

nurse, we had better make some attempt to provide this group with learning experiences directed toward their jobs. In the main, these people are being used as charge nurses, team leaders or medicine nurses, yet our curriculum does not contain even basic leadership skills.

Furthermore, with only 34% of the respondents working the day tour of duty, is it rational for schools to delete 3-11 and 11-7 student experience? When we claim to be producing a team member, can we justify a curriculum in which, at no time, is the student allowed to experience full membership on a team?

There is no justification for continuing to do things in a traditional way which is time consuming and inefficient in achieving goals, or to change for the sake of change alone. When students feel the need for and request these experiences, we cannot justify the omission of them from the curriculum. Lack of control over important components of these learning experiences has led to frustration on the part of students, teachers and employers. The students of practical nursing are adults and should be more involved in planning their program and faculties should become more responsive to the expressed desires, both of the students and their potential employers.

By no stretch of the imagination can faculty responsibility for provision of adequately prepared practitioners be turned over to the newly developing in-service education departments in employing institutions. In fact, many institutions do not even have such a department!

> "In nursing, inservice education has as its objectives the provision of a better quality of nursing care, achieved through a better quality of nursing performance.... Inservice education ought not be designed to replace or remedy pre service education.... All too often, inservice education is burdened with making up deficiencies in the pre service educational programs. They must teach the nursing job almost from the ground up." 4

The author holds the belief that practical nursing is and always will be the first level of nursing education and that all practical nursing faculties must accept this premise and recognize that they are individually and collectively accountable for providing learning experiences for each student which will prepare the graduate for making safe, effective judgments in her job.

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[4] Doroty Louise Ellison, R.N., "A Rotation Experience Helps Educate Nurses," Hospital Management, Vol. 105, No. 2 (Feb. 1968), P. 72.

Summary

Hopefully, the objectives of this study have been met - provision of factual information, delineation of areas where changes seem in order, consideration of selection policies, utilization patterns and faculty acceptance of the concept of their accountability for the success or failure of the graduates. Such studies should be made of many schools for comparison and validation of findings. These could be powerful tools with which the legislators in our state could resurface the road to attainment of national goals to provide adequate health care for all, and provide continuing reappraisal of the role and function of vocational, technical, and adult education in our homeland.

Wrong opinions and practices
gradually yield to fact and argument;
but facts and arguments,
to produce any effect on the mind,
must be brought before it.

---John Stuart Mill

Appendix I

ORANGE COUNTY
325 NORTH PALMETTO AVENUE
ORLANDO, FLORIDA 32801

VOCATIONAL SCHOOL
STUART C. VAN VOORHEES, DIRECTOR
TELEPHONE: 425-2756

January 15, 1970

Dear Graduate of Orange County Vocational School Practical Nursing:

The State Department of Education and the State Board of Nursing have requested that a survey be made to determine the effectiveness of our program.

We are sending this questionnaire to each graduate, since we believe that your answer to these questions are our only means of doing this. You may fill in your name or not, whichever you desire to do, but please do return the form at your earliest convenience in the enclosed envelope.

We sincerely appreciate your cooperation in this endeavor.

With kind personal regards to you and your family.

Sincerely,

Etta S. McCulloch, R. N.
Head, Department of Health
Occupations Education

ESM:kac

Appendix II

FOLLOW UP SURVEY O. C. V. S. JANUARY 15, 1970

Name _____ FLORIDA LICENSE # _____

NAME WHILE IN TRAINING _____

_____ 1. Present age: (a) 19-25 (b) 26-30 (c) 31-35 (d) 36-40 (e) 41-45 (f) 46-50 (g) 51-55 (h) over 55

_____ 2. Date of graduation. Month and year.

_____ 3. Are you licensed in Florida?

_____ 4. Are you licensed in state other than Florida?

_____ 5. Are you currently employed, as a licensed Practical Nurse?

_____ 6. Have you been continuously employed as an LPN whenever desired? (a) yes (b) no

_____ 7. Have you been employed in an occupation(s) other than Practical Nursing since graduation? (a) yes (b) no

_____ 8. Where are you now employed? (a) hospital (b) nursing home (c) doctor's office (d) private duty (e) other

_____ 9. Size of employing institution if applicable: (a) fewer than 50 beds (b) 51-99 (c) 100 or more beds.

_____10. How long have you been with present employer? (a) less than 3 months (b) 3-6 months (c) 6-12 (d) 13-24 (e) two years or more?

_____11. If employed by hospital, on which of these services do you usually spend three-quarters of your time? (a) medical-surgical (b) maternity (c) pediatrics (d) nursery (e) other

_____12. On which shift do you usually work? (a) morning (b) afternoon (c) night (d) rotating (e) other

_____13. What was your beginning monthly gross salary? (approxm)

_____14. What is your present monthly gross salary? (approxm)

_____15. Each week you work (a) 5 days (b) 5½ days (c) 6 days (d) more?

_____16. Do you give medications? (a) oral (b) intramuscular (c) both (d) none?

_____17. Do you usually have patient assignments? (a) yes (b) no

_____18. If applicable, how many patients? (a) 5-10 (b) 11-20 (c) 21 or more

_____ 19. If applicable, how have you secured private duty?
(a) registry (b) hospitals (c) other nursing bureau
(d) other source

_____ 20. Has your work in nursing met your expectations in terms of:
(a) yes (b) no

20. _____ personal satisfaction

21. _____ salary

22. _____ working conditions

23. _____ employment opportunities

24 _____ (21.) Did the curriculum offerings of your training meet your need as a beginning licensed practical nurse? (a) yes (b) no

25 _____ (22.) Do you feel that the curriculum offerings contained too much theory? (a) yes (b) no

26 _____ (23.) Do you feel that the curriculum offerings contained too little theory? (a) yes (b) no

27 _____ (24.) Have you attended any formal education program since graduation?
(a) yes (b) no

28 _____ (25.) Do you plan on furthering your education in nursing?
(a) yes (b) no

29 _____ (26.) How many times have you changed positions since graduation?

30 _____ (27.) Are you a member of your local practical nurse association division? (a) yes (b) no

31 _____ (28.) Comments: Please be specific in any suggestions or criticisms. We need your reactions.

32 _____ (29.) What, if any, scholarship assistance did you receive?
Describe:

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VOCATIONAL GUIDANCE SEMINAR (NASHVILLE, TENNESSEE, JUNE 7-JUNE 11, 1971).
NASHVILLE STATE TECHNICAL INST., TENN.
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DESCRIPTORS - *POST SECONDARY EDUCATION; *EDUCATIONAL OPPORTUNITIES; *VOCATIONAL COUNSELING; *COUNSELORS; CONFERENCE REPORTS; *SEMINARS; VOCATIONAL DEVELOPMENT; WORKING WOMEN; FOLLOWUP STUDIES; WORK ATTITUDES; PROGRAM DESCRIPTIONS; TECHNICAL INSTITUTES; AREA VOCATIONAL SCHOOLS; VOCATIONAL EDUCATION

ABSTRACT - TO BROADEN THEIR UNDERSTANDING OF THE EDUCATIONAL OPPORTUNITIES OF LESS THAN A BACCALAUREATE DEGREE, 35 GUIDANCE COUNSELORS FROM THE NASHVILLE METROPOLITAN SENIOR HIGH SCHOOLS ATTENDED A 5-DAY SEMINAR WORKSHOP. IN ADDITION TO TOURS AND DESCRIPTIONS OF THE PROGRAMS AT AN AREA VOCATIONAL SCHOOL AND TECHNICAL INSTITUTE, WORKSHOP ACTIVITIES INCLUDED THESE MAJOR PRESENTATIONS: (1) "MOTIVATION, EXIT LEVELS, LEARNING, AND TEACHING" BY H. GREGORY, (2) "FOLLOW-UP METHODS AND PROCEDURES," BY J. JUDD, (3) "ERIC MATERIALS--VIEW PROGRAM" BY G. BICE AND D. WILDER, (4) "THE EMERGING WOMEN: IMPLICATIONS FOR THE SCHOOL COUNSELOR" BY G. GREENBERG, AND (5) "WORK, CAREER DEVELOPMENT, AND ATTITUDES" BY J.M. COZY. TEXTS OF THESE AND OTHER PRESENTATIONS ARE INCLUDED IN THIS REPORT. (SB)

VT 016 142

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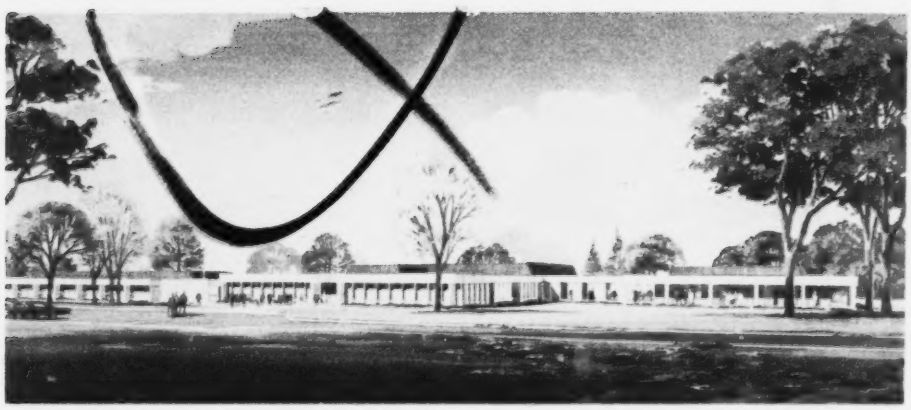

VT 016142

June 7 — June 11

1971

INTRODUCTION

The information contained in this publication was developed at a workshop for guidance counselors from the Nashville Metropolitan senior high schools. The purpose of this workshop was to broaden the counselors' understanding of the educational opportunities of less than four years or baccalaureate degree level.

Past workshop experiences and visitation programs seem to indicate that the majority of the secondary school counselors possess adequate competencies in counseling with the college-bound and the potential college-bound students. These same experiences also indicate that many of the secondary school counselors are severely handicapped when counseling with those who do not plan to pursue the baccalaureate degree program. Many efforts have been instigated to assist the secondary school counselor to attain background experiences and to develop competencies in those areas that indicate deficiencies. Tours have been conducted through technical institutes, area vocational-technical schools, industries, businesses, drive-in conferences, visitations with the counselor in his own setting, assembly program presentations, etc. Each of these activities has contributed to the broadening background, knowledge, and understanding. However, it appears that workshop activity directed specifically toward alleviation of the above-stated deficiency has been the most effective approach.

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EDUCATION FOR THE WORLD OF WORK

Edward L. Weld, Director
Nashville State Technical Institute
Nashville, Tennessee

We wish to welcome each of you to the Nashville State Technical Institute. We consider that the guidance counselors are the most important professional group in informing students about and directing their attention to Nashville State Technical Institute and Nashville Area Vocational-Technical School. For this reason, you have been invited to our first seminar on vocational and technical education. If there is anything we can do so that your attendance at this conference will be more enjoyable and more rewarding, please let us know.

"Education for the World of Work" is the single most important theme today. There must be a job in every person's future. We cannot afford to have unemployed people. The only goods and services which we will enjoy are those which we produce. Our objective should be economic independence for everyone; this objective rests on the ability of a person to be a producer of goods and services for which he can receive fair compensation.

There are persons who sincerely believe that our salvation--the salvation of our industrial nation--depends on vocational and technical education. I think that this is an overstatement; however, I do believe that the solution to many of our most important social problems rests with vocational and technical education.

Today the young people 16 to 19 years of age are the greatest single group of unemployed Americans. Twenty-seven percent of all unemployed are in this 16-19 age group. The unemployment rate in the age group 16 to 24 is approximately three times higher than the unemployment rate of older persons.

All of our social problems, such as delinquency and crime, are closely related to unemployment. These young people must be prepared for employment and useful lives. We need the productive capacities of every person who is physically and mentally able to work if we expect to support the number of persons who by necessity must be on welfare.

We know that for the United States only 50% of those students who graduate from high school continue their education in a college, vocational school, technical institute or any other post-secondary school. Also, we know that of those students who enter college only 50% of them graduate with a bachelor's degree. Only 20% of the young people in the United States receive a bachelor's degree. This means that education must be made available for this other 80% who are non-bachelor degree students so they will be prepared for employment.

I believe that every student should acquire a marketable competence before he leaves high school. The New York Public Schools have already taken the first step in this direction. They have abolished their track system and every student is now required to complete a vocational education course in order to graduate from high school. The Nashville Metropolitan School System has taken the first step in this direction by establishing the McGavock High School, a comprehensive high school offering vocational and technical programs. Other comprehensive high schools, offering vocational and technical training, are planned by the Nashville Metropolitan School System.

The Nashville State Technical Institute is preparing students for the World of Work. Our educational programs at the Nashville State Technical Institue could be classified in three categories:

First, we offer two-year college-level programs for the preparation of technicians. These programs leading to an associate degree are offered both during the day and in the evening. We are now offering Business Data Processing Technology, a program which prepares students to use the computer in keeping business records, and five Engineering Technology Programs: Chemical, Electrical, Electronic, Industrial and Mechanical. Industry has the greatest need for students trained in these programs. Since there has been a high demand and a short supply of technicians, the salaries of technicians have been high. The average beginning salary of 1970 graduates of two-year engineering technology programs was $600 per month or $7,200 per year.

Second, we offer remedial work in mathematics, physical science, reading and English for students who are not prepared to begin college-level courses. About 50% of the students who enter a technical institute in the United States--and our experience at Nashville Tech is about the same--require remedial work in one or more subjects. Our objective is to help as many students as we can so that they will become technicians and productive citizens.

Third, we offer both our associate degree courses and special courses to improve the competence of employed technicians and to retrain employed technicians for another position or a better position. We are authorized by the State Board for Vocational Education to offer courses to meet the needs of industry.

During this seminar, you will hear more about our programs and courses from the teachers who are the persons best qualified to give you this information. During our coffee breaks, I hope to visit with you and try to answer any questions you may have about Nashville State Technical Institute.

A few years ago Nikita Khrushchev beat the table with his shoe at a meeting of the United Nations and shouted that our grandchildren would live under Communism. I pray that our grandchildren and Mr. Khrushchev's grandchildren will enjoy the freedom of our democratic system. If we work together to prepare students for the World of Work, I believe that God will answer this prayer.

WELCOME & ORIENTATION

Mr. Jack L. Sandlin
Superintendent
Area Vocational-Technical School
Nashville, Tennessee

I'd like to say to the group here that it's a genuine pleasure on behalf of the Area Vocational-Technical School to say hello. I'd like to respond before I start to Mr. Ed Weld, my neighbor, and to say that he did one of the nicest opening addresses that I have had the pleasure of hearing, here or anywhere else.

We truly have a wonderful opportunity out here to be identified with this World of Work. I think sometimes that maybe this phrase gets worked, not overworked ever, but well worked. We are identified with training people for the World of Work, and I like to think of our program over at the Area Vocational-Technical School as the bridge between man and his work. It is a different level. This is one of the reasons for having you here, so that we hopefully will be able to identify and to get closer together toward joining hands in the direction of this World of Work.

I have here four brief purposes. (As Mr. Weld stated, this will be recorded.) I plan to have this as a handout when you gather over at the Area Vocational-Technical School on Thursday. But to assist, to help, in identifying the two areas, to separate to the extent that we would like them to be separated--and that's very little because you will find the twine is interwoven between the two as the week goes along. But I would like, with your permission, to read the role and scope of the Area Vocational-Technical School and brief comments on it.

There are four headings. They are:

(1) Introduction and Statement of Purpose. Most of you have heard them; you know them; but we finally have it down in a few words.
(2) The Definition of an Area Vocational-Technical School
(3) Methods of Operation and Administration
(4) The Persons to be Served in Admissions Requirements

Those are the four basic headings.

Under Introduction and Statement of Purpose, the General Assembly of the State of Tennessee in 1963 directed the State Board for Vocational Education to locate, establish, construct, and operate a state-wide system of Area Vocational-Technical Schools. The intent of this legislation was to meet more adequately the occupational training needs of citizens and residents of the State. This includes employees and future employees of existing and prospective industries and business.

Number 2, Definition of an Area Vocational-Technical School. An

Area Vocational-Technical School is an institute which serves people in a broad geographical area consisting of two or more counties offering occupational training of less than college level. Now that's a key phrase right there, and I hope that you will become more conscious of it as the week goes on--"less than college level."

3. Methods of Operation and Administration. The Area Vocational-Technical Schools are administered by the State Board for Vocational Education and may be operated directly by the State Board for Vocational Education or by contract with:

(1) any local board or boards of education in any county, city, or special school district;
(2) any county or counties, or municipality;
(3) any other agency, any other public or private body, board, foundation, or agency; or
(4) any individual or group of individuals as the State Board for Vocational Education may deem necessary.

4A. Persons to be Served in Admission Requirements. The Area Vocational-Technical School may provide occupational training of less than college credit for high school youth, school dropouts, adults needing retraining, the handicapped and disadvantaged, the older workers, apprentices, and other employed learners and employed workers.

4B. Admission Requirements. Any resident of Tennessee who is a high school graduate or who has legally left the full-time school and possesses certain basic aptitudes and interests may be eligible for admission. Selected high school students, 16 years of age and above, may enroll upon special agreement between their respective local boards of education and the State Board. Credits earned shall be granted by the local high school upon recommendation by the local Area Vocational-Technical Schools. Persons desiring to take a course must file an application for admission. All full time students will be required to take the General Aptitude Test Battery. After the completed application form is received and the results of the aptitude test evaluated, an interview and counseling session will be arranged with each applicant. Applicants accepted may enroll in occupational training courses at any time a vacancy exists. That's a short and rather to the point and very brief comment on two or three requirements to help set the thinking for the week in order.

Under number 2 where we said "training of less than college grade." It is interesting to note that the present enrollment of the Area School is 541 as of this morning; there were twelve new ones being registered when I left over there a few minutes ago. Of that total enrollment, over 85 percent are high school graduates or better. This is a figure that has stayed constant since the day we started it, and it's just been an interesting one of those little things that has happened; it wasn't planned that way.

As most of you know, under number 2 where we said "methods of operation and administration," we've had the pleasure of serving

the Area School program here under three of those. It started in 1963 under the then City Board of Education. We went through that one and into the Metro program, and then from there to a state operation and effective this past April, April first of this year, we became a full-fledged state operation having no connection with the Metro Board of Education. But it has been a genuine pleasure to have been exposed to the others, something that the fellows that have gone directly into the state programs could not enjoy.

I had the pleasure of working with Mrs. Pease and two or three of the other counselors that I see here that I would have missed being so close with had I been a state operation to begin with; so it was a pleasure.

Persons to be served and Admissions Requirements are fairly clear. I would like to state here that we have three distinct type programs. Number one is the full time programs. These are six hours a day, five days a week, for the duration of the course of training, whatever it might be. Then we have the supplementary programs which are for people who are employed and who wish to upgrade themselves in their particular skills. Most of these meet in the evening; it's not required that they do; they can be either day or evening. And the part-time preparatory which is for people who are employed but are unhappy in their present employment and for some reason cannot attend a full time program but they can go in most cases four hours a day, four or five days a week to learn a new skill.

You will find quite a mixture of programs, quite a mixture of people. We, at present, have 21 different programs operating. We'll not name those; you'll see them shortly; and I, like Mr. Weld, hope to be wandering around so much and so closely involved that if you have questions or want to identify one of the odd ones, don't mind saying so.

We will be looking forward to a most enjoyable week, particularly from over across the street on Thursday and Friday when we'll have an opportunity to have you there in the building talking with the instructors that are in charge of the various programs who are truly the knowledgeable ones.

Thank you very kindly and enjoy the week.

ORIENTATION

Mr. Guy Phipps
Registrar
Nashville State Technical Institute
Nashville, Tennessee

Thank you Mr. Sandlin. I thought Mr. Weld and Mr. Sandlin did an excellent job welcoming you to our two institutions. Several of you I know. I've been in workshops with you in my former position as State Supervisor of Vocational-Technical Guidance, and I am now Director of Admissions and Records here. I don't know how much I helped any of you in my former position; I hope I can help you more in this position.

We deliberately did not introduce Mr. Weld and Mr. Sandlin this morning because we wanted a setting of informality. We want this to be very informal; we want you to enjoy yourselves. If those ties get a little tight, just loosen them up and really relax and enjoy yourself and become part of our institutions here. Just don't come barefooted; any other way will be just fine. Let's form a real partnership this week if we can, and I think we can. I think you'll find that most of our people, I think you'll find that all of our people, at both institutions are here to help in any way. Please feel free to be just downright nosy. If you want to know something, interrupt and ask us. Now I can't answer you, but I'll find the answer if you ask me and I'll find it someplace in the building. I've been here about two months, and I've asked more questions than I have all the rest of my life put together. I have been real fortunate in having the questions answered for me.

You'll see this week we are in a period of final examinations so you'll see some harried, hurried young people buzzing around here. (I should have added worried to it.) But they are in a period of final exams the 7th, 8th, and 9th, (today, Tuesday, and Wednesday), they'll be out the last two days so you won't see a great many students around here; but I think you'll find them to be rather friendly also.

We want you to enjoy this week as much as you possibly can. I know you are just completing a hard year's work; I realize this. We set the seminar dates at this particular time for several reasons. One is so you could get it over with and you could have the rest of your summer.

Mrs. Pease and Dr. Greenberg have just been wonderful in working with us on this. In fact, without them we couldn't have set this program up. The time schedules are pretty rigid; however, we don't want to feel that we have to stay right with these things. We want this to be a real week, as I said, of informality, just enjoying yourself and trying to get the most we can out of it. Any time you have a question, just pop up and ask it. We will stay fairly close to this schedule on some things, such as breaks. We will stay fairly

close when we have guest speakers come in. I'll be the luckiest man in town if they all show up.

Now, before we register and two of our other people talk to you for a few moments, we have some programs, a list of participants, and a little pretesting that will take you about two minutes to do. We would like you to do this just as honestly as you possibly can. We've got the objectives of the workshop that we'd like for you to look at and to have because we'll ask you some questions about those later on. And what's most important, we have your meal tickets for the week. We have your name tags too, and we'd like for you to pick those up. The next person on the program is your wonderful and fine supervisor in the Metro system, Mrs. Pease.

RESPONSE TO WELCOME

Mrs. Dorothy Pease, Supervisor
Guidance, Metro School System
Nashville, Tennessee

Mr. Weld, Mr. Sandlin, Dr. Greenberg, Mr. Phipps: I think that the main thing that I would like to say this morning is to express my appreciation and the appreciation of the group for the opportunity to participate.

We have used both the Area Technical and the Area Vocational School a great deal for our graduating seniors. We look forward to the day when we can use it even more. And Mr. Weld, you said today two things: "economic independence for everyone" and "all students must have a marketable skill." I hope that within the five days that we are here as a group and as counselors that we will be able to have a better understanding of the counselor's role in this particular program and in career development.

Again, our appreciation at the opportunity to participate. Thank you very much.

INTRODUCTORY REMARKS

Dr. Gilda Greenberg, Associate Professor
University of Tennessee at Nashville
Nashville, Tennessee

I would like to thank the people who helped to bring about this seminar for school counselors. The cooperative efforts, on the part of Mr. Weld, Mr. Sandlin, Mr. Phipps, Mrs. Pease and Mr. Dunn, were instrumental in creating the fine program in which you will participate.

I am committed to the fact that counselors should be made aware of every opportunity that is available for all of their students. Therefore, we must look into every aspect of vocational development and choice.

At a special conference on Vocational Aspects of Counselor Education in Virginia in 1965, several important counselor competencies were formulated. I have duplicated these for your information and would like you to examine each one carefully to find out your individual counselor quotient. How do you rate? Can you meet these competencies? If your score is perfect, then you are already a master counselor. If not, then perhaps this seminar will provide you with the opportunity to improve.

As a counselor educator I want to become part of this group, but I also want to attempt to be the facilitator of learning. We can then develop ideas together and perhaps consider various hypotheses for becoming more effective with the people we serve.

One of your assignments for Problems in Educational Psychology and Guidance (Ed. Psych. 5850) will require that you try to be as creative as possible in planning some new phase of your program in vocational counseling for the next school year. In the fall, we are going to follow up to find out what you have done. The success of this seminar will depend upon the changes made by you to assist your counselees.

(At this point mimeographed materials and outlines were distributed and discussed.)

We are here today because we are going through a social revolution that is of great significance to the school counselor. It is essential that we view our new role as agents of change. Our counselees, more than ever before, need to make their own decisions and develop skills to accept alternative actions.

The employment market is becoming increasingly difficult, even for the Ph.D. Therefore, the knowledge you gain here should be of some assistance in your work with students, parents, and those who are influential in the lives of these young people.

I want to thank you for joing us in this seminar and we are certain that the coming days will prove to be beneficial to all who participate.

NOTE: See Appendix, Pages 146 - 154 for Handouts.

MOTIVATION, EXIT LEVELS, LEARNING AND TEACHING

Harold Gregory, Director
Curriculum and Instructional Services
Division of Vocational-Technical Education

Thank you, Mr. Phipps, Dr. Greenberg. Mr. Sandlin, of course, is here to watch me, to make sure that I do everything right. One of my instructors is in the audience, Mr. Dorris. I taught at Hendersonville; that's what I kept telling him when he was principal there. Really, all I did was call the roll, but I got a salary anyway. Finally he got me on the right track of teaching.

I appreciate the opportunity of being here and the tremendous job that you in the field of guidance and counseling have performed and will be performing, I know, in the future. We develop new programs where there is something other than a university level exit. I think we are very fortunate in the State of Tennessee to see developing the many avenues and channels for education. During the past ten years, maybe five, there has been a rapid growth of the industrial atmosphere in Tennessee. Some of the largest plants in the South are located in Tennessee. We had a workshop about two weeks ago at Tennessee Eastman, the largest company in the state and the largest in the Mid-South. We had the opportunity to look at their educational program. So through this rapid growth of education in the State of Tennessee, we have had a rapid growth in our educational facilities, philosophy changes, directions, all types of avenues.

Any educational program you start, there's pros and there's cons. This reminds me, and Mr. Dorris can tell you, all my family are involved in education in some way. He says my father was the first one who gave him a whipping in school. But anyway, during the depression, Uncle Jack was looking for a job. They were scarce; one of the superintendents told him there was a job, a rural school, that he could have. But, he said that with this job you'll have to please the board member. So Uncle Jack went to the board member and the board member said, "Yes, we have a job," and you can imagine what type of board member, "but," he said, "we don't want just anybody teaching, and I've got a question I want to ask. I want to know, do you teach the world round or do you teach it flat?"

Now Uncle Jack wanted the job real bad; it was during the depression. So he thought a little while and said, "I can teach it either way; which way you want it taught?"

I'm afraid that a great deal of our education depends upon our own viewpoint, our own philosophy, and is it based on facts, needs, etc.? Or is it based totally on our experience?

Abraham Lincoln, who is considered the Father of Vocational-Technical Education, made this statement:

> "Educated people must labor; otherwise, education itself would become a positive, intolerable evil. No country can sustain idleness of more than a small percentage of its people. The great majority must labor and labor in something productive."

Now, I think this statement Abe Lincoln made was up-to-date and to this day is up-to-date, telling it as it is; and I think it will still tell it as it is. If education is for labor, then what type of programs must we have? They must be based on the job requirements. I've drawn some triangles here to illustrate a point, I hope.

If this is a payroll job or a position, whether it be a doctor, a dentist, janitor, or whatever, there is a certain amount of training which must take place for this person to become employed at this point.

Now, we know a great deal of the training overlaps. If this was the medical profession, a nurse, doctor, lawyer, Indian Chief, down in the beginning the needs for one occupation are practically the same as another. As you move up the triangle, then it becomes specialized. But there are many commonalities in our educational program. The first grade probably is basic to most any profession, but too often our first grade will not point this out. Too often, we do not relate this from the beginning. They kid me about talking about vocational-technical education K through on. They always kid me about my vocational-technical kindergartens. But I really think that this has a point. I think there should be vocational kindergartens.

In the Vo-Tec News, the May issue, 1968, the Assistant Commissioner, Mr. Charlie M. Dunn, gave an article illustrating the trends in curriculum development and then he gave a presentation on this later, and I have stolen his transparencies and used them ever since. So my comments here will be basically from his article. If you have this Vo-Tec News, May, 1968, this entire article is there. But I'll try to give the highlights with the transparencies.

The first illustration shows the educational program as a time factor and a breadth factor, and this would be leading to an occupation. And so our educational system has these two years to eight years, I suppose, if you're going to be a medical doctor. But yet, when do you learn to teach or to be a counselor? It's when you begin the occupation, a great deal of it.

So a great deal of training takes place at this point. So this is our traditional plan that we use in curriculum levels and so forth. We would like to point out that from the sixth grade down we need books concerning the world of work. Sure, they read about the train with the smoke coming out; but is it reality? What should they be reading about?

There have been some experimental programs, one at Overton County, where the kindergarten children were given tools to build something. They built houses, etc. They didn't look much like houses, but at least they talked about them. But too many of the opportunities to give true experience to our youth have been lost in the early age. Where is the attitude that you're worried about really in counseling? Does it start at the first grade level? The attitude toward work, is this the beginning or is it before then? You keep hearing this: Well, what can we do with them after a certain age? It always goes back - it's the fault of the teacher before me. When you get to the mother, it's the father's side of the family that they inherited. Or if you get to the father, it's the mother. So it is never anyone's fault, but somewhere we have missed the opportunity. So we think at this point there should be a great deal of information about the world of work.

Somewhere beginning between the sixth and eighth grade levels, what about some exploratory possibilities? In the state of Kansas there was an experiment where the students went to the world of work. They went to the barber shop and found out what it was to be a barber. Just observed and then wrote a report. Whether good or bad, it was experimental. They visited other places.

Why does a person want to be an engineer? Because the money is good. But he may be a washout if we don't give him more information than this. Then it's the next we think they should be concerned with what we refer to as occupational families. Then somewhere along the 12th grade, the clusters of occupations and then higher in specialization.

Now, I first started my show with tinker toys and just so I'll not lose my image, I would like to use them to illustrate this point. This may be the world of work at the first grade level, and there are jobs in here and all sorts of things; and we may have to talk about them from K through sixth about the world of work and the many opportunities. But as he starts moving up the schedule, then we want him to think about a cluster, so we'll take some of this off and look at a cluster.

A cluster might be in the family of medicine or the family of agriculture, homemaking, merchandising - might be a large family in that you may have large families. For example, take the field of medicine. We have a cluster here that must require degrees--some of them eight years of higher learning--some of them two, three, and four. So let's break this down to a cluster that we deal with in the area school.

This might be a cluster of what we refer to in the area schools as service occupations in the field of medicine. If one of these jobs starts out with a nurse's aid, it might end as a practical nurse, dental assistant, dental technician, operating room technician. It might include the porter, janitorial work and so on. This would be

a cluster of service occupations. And as you move through this, the ideal way would be to study the information and let him select. This would be the cluster of programs. As he moves through here, he may decide that he can be a PN, LPN; this may be his goal, but it will relate to all the others. Our educational programs as we move through this should relate to the job that he selects.

This is a big, changing world, and to illustrate this point--why do we need this? Well, my daddy was a farmer basically; he taught school some. But you didn't have to tell me what his job was; I could tell you. Now, I have a senior who's graduating from high school, and I have a junior, one in the eighth grade, and one in the second grade. Now year before last I spent thirteen weeks at Holiday Hills Resort in Crossville. Last week I was in Elizabethton. The week before, I was in Tri-Cities; the week before that I was in Knoxville, and I get to stay in the better motels. Now, check any of these four children and go home and tell them what my job is and how I earn a living. It sounds more like a vacation to them. Where are you going to be? And finally they get to where they never ask where I am, just when are you coming back. No idea really.

What are you referred to at home? Teacher or just what you do, mommy and daddy. We must get this information across about the world of work. It's so complex we cannot observe it. It looks like my tinker toys. So through here we must give them some type of experience. The ideal way is for the student to start down here who knows he's going to be a medical doctor. We go through here and give him information about this and then he gets experience, and then he goes on. This would be the ideal way. A good program. It complements all the way. But he doesn't know. But the danger, in place of taking the idea away has been pointed out, he is going to leave us. And we still have over 30 percent leaving before the eighth grade according to Mr. Dunn's article. Drops out of school.

Now, traditionally, we have said that if he leaves school, this is bad. We would have helped him if he had stayed with us. I heard one doctor in an education field state that some people didn't have sense enough to be dropouts; they just endured any kind of educational program because someone told him it was good. So really, part of our dropouts are not the student; it is our fault. So if he drops out, we should let him enter back in at the same point. He should be able to come back to our educational program. But can he?

Mrs. Young, in my home county, they gave her the job of teaching to get a high school diploma. She went to the high school and taught sixth grade level. So every afternoon, she had to get all her books, go to the high school, teach that night, and bring them back. But it was highly successful. The next year, she said, "I'll teach it, but I'm not transporting all this junk over there and back and forth; they can come to my room or else." And it was a total failure. The forty-year old didn't want to sit in a sixth grade room. Now he may need to read "Mary Had a Little Lamb", but if it is a forty-year old man and if you're going to keep his interest, Mary better have something besides a little lamb. So we've got to have materials, interesting

and on the proper level. We've got to have the proper environment of each one of these for him to come back into our classroom. Where does the classroom stop? What is the learning situation? Do we really have to have a classroom? The Labor Department is looking at this total thing of training for employment, and Abraham Lincoln said that educated people must work and the Labor Department is not too interested in the classroom. If you get the opportunity, Eastman has an excellent set-up which they call Self-Teach Centers for employees to come in. So what are the trends in the development? We've got to look at a number of things. We think in our curriculum development that we are trying to develop what refer to as "prescription course outlines". If the student comes in at a certain level, let's start him at this level, and it sounds real good to talk about and we're making progress, but it's hard to change your instructors, and we're not getting all the progress that we desire, naturally.

Too many students are repeating the same materials--too many in your secondary programs, too many in your post-secondary, and even in elementary; you'll find a great deal of repeating of the many things that they have been exposed to.

I've covered curriculum and this and that and something else, so I can tell you all I know about most anything in a very short time. You're going to get the total works evidently. I would like to move from this to the subject of motivation at this point. When you visit a company, they say send me a person who's motivated. What is motivation and what do we in the school have to do with it or do about it?

Tennessee Eastman, in checking with their check list of their employees, has listed here about seven. The first one says "Application to Work" which is "stickability". The second one, the "Quality of Work"; the third one, "Speed of Work"; the fourth one, "How Does He Follow Instructions"; the fifth one, "Initiative"; the sixth one, "Conduct on the Job"; and the seventh one, "Relationship to Others".

We must start looking at the things at which other people look. One authority said that if you take a person and remove every trait or ability he has and leave him with being motivated, it will not take him long to develop back all the other things he needs. But if you leave him with all of his other abilities and take away his motivation, he has no will to think, no desire to live, no courage to develop, no purpose of action, and no action of purpose. So motivation is highly important, but in our traditional systems I will accuse the educators of doing (if I may use the word) the de-motivating.

A study was made of a group of employees: What do you want out of your job? The first thing listed was security, not money. It would be a job next year. Security comes about basically by success. However, our educational systems, the traditional type, is now built upon failure. You do this or you're going to fail--or you do this or you'll be sorry. These seldom accent the success; the threat is usually built around failure.

They said another thing that they wanted was interesting work. In our traditional programs, it's just so you're average. We don't look for ways to make or cause interest in our programs. But the second thing they, the employees, want is interesting work. But we say, just be average; average from the top to the bottom, or bottom to the top. But another expression, and I think average is good in a lot of things, but an example is - take a man and put one foot in ice water, one foot in boiling water, and on the average he's comfortable. So there's a lot of times average really doesn't exist and is not needed.

Another thing that the employees have pointed out is the speed that he moves. Our traditional program says, endure twelve years and we'll give you a diploma. Stick around. So really do we encourage him in our traditional programs?

A reason for being happy in work has been pointed out as job recognition or being recognized. In most of our traditional programs, you're a number; you move with the group. Too often in a large institution your instructor never knows your name. You get very little recognition. If you're real bad or real good, you'll get a lot of recognition. But these are the ones we give recognition.

The fifth thing that I'd like to point out here is initiative. Traditionally in our educational programs, initiative was not too important because they'll declare me a social something and promote me anyway. We have social promotion, and you don't have to have much initiative to move in this direction.

The sixth one I would like for you to consider is the lack of value of work. I think we are living in a society today which says, "I'm free; I'll do as I please." I think that with all the studies and everything that we have read, man is happy when he is serving and of service to someone. But our trend in America today is saying that man is happy when he owes no man anything. So pay all your debts; don't be obligated; don't do this.

I saw a little cartoon the other day. The first grade student was telling his friend, "School is all right if you can just keep from getting involved." And I think this is a trend today.

We should be involved as a service to our people. I think our educational programs have moved in a direction to de-motivate. To use an example over here, and I hope this will work; it's a new one.

...and by the time he travels through eight years, he's got his de-motivated cage on. You're not going to get to me. Not at all. And taking these six things that we have talked about, we'll let the first bar out here represent the lack of security. If we can give him security or give him some type of success, we can remove this. And so failure has de-motivated him. The second one, let's let him move and recognize him and not make him fight against the average of everything. Everything is built around the average. What about

enduring for so many years before you get anywhere. We ought to have an educational program in which the time factor is not the major factor. We ought to have some way that you don't have to be at the extreme top or the extreme bottom to be recognized as an individual. But some way we need to recognize each student that we have involved, and we need to find some way to do this. And we must find some way to promote him on his own ability and it is not necessary for him to say "I'm free and I don't owe anyone anything." And we must find some way to let him find a sense of value in the world of work, to be of service, to be doing something that is meaningful. How many activities in school are meaningful? But we must find these avenues to do this.

Now the bars that I have listed here, and I have some handouts here that you're welcome to take, I'd say are reasons why we, the educators, are at fault. The first that I'd like to touch on is when you present something new in the curriculum development or in teaching and the teacher will say, "Well, we've never done it that way." Haven't you heard that? So we've got to get rid of this excuse by your instructors or our school system. "We've never done it that way." This whole complex that you're in is something new. It's never been done that way before, and there will be some people against it for that reason.

Another one: You ask someone to try something new and they'll say "Gee, we're just not ready for that. You're moving too fast." So we must get this out of the minds of our staff. "We're just not ready for it. Don't give me that type stuff; we're not ready for it."

The other one is one I think we hear all the time. "We're doing all right without it; we're doing fine. What's wrong with you, trying to change everything. We've done all right; I'll stand on my record."

"I had three to start in college. How many quit? Oh, I don't know. But that's a good percentage; we're doing all right."

This one "tried it once; it just won't work". Tried it <u>once</u>. Another one is a good catch-all. Most anything you think about costs money. That's one reason all these things didn't cost a whole lot in my demonstration. "Why don't we do so and so? It just simply costs too much." Now this is at the administrator's level. And then if none of those work, we come up with this one: "It's just not my responsibility. Not in my job description; don't talk to me about that."

Now, if we can get our little man out (and I hope this part works well 'cause...) here's our little fellow. We've got him around to the point of not being motivated. What are we going to do to make him become motivated. You're going to have to try a number of things. What'll work for one person won't work for another. So no prescriptions in it. You know you've got to add a little

something. We'd like to get him motivated, but this one doesn't work. I certainly hope this one does. And so if we get the right one, we're going to light him up. These look the same, so this teacher can say I used the materials the same way, but you've got to get the right prescription. You've got to add to him what will make him interested; there's no magic formula to it. And you as counselors realize that this is something that must be done individually and a great deal of study and things must be done to do this. But traditionally, we have talked about our activities of grouping. It's real good; just give me a group of people all the same. Give me some that are gifted, nothing else. I want them all the same. I'm against grouping in one way, and in another way, I'm for it. And so I'd like to present to you my perfectly homogeneous grouping.

Now these are exactly the same; same ability and everything. We'll assume this. Now this is my little classroom and I'm going to work with them. So I pick this one out and work with him. Now the problem child gets in trouble and Mr. Average doesn't get anything. So I'll say I'll go the other way. I'll work with the problem child and the genius causes trouble. I'd like to have a roomful of these three. Nothing bugs them, good or bad. They're just there. They're nice to work with, no difficulties at all but then I try to work with this fellow, that nut causes trouble. And if I'm one of these do-good teachers who says that this student can make it without me, I'm going to work with this one. Well, these over here start whittling up the desk because they don't have anything to do. We cannot develop really at this point. Now, maybe we'll get to where we can test them all and have them all nice and neat in the same package, but I doubt seriously that we'll ever do this. I doubt that we'll ever come close to this type of grouping.

There are a great deal of things that can be done by grouping and by lecture, etc. Now the tradition is to get them in the room, to move them all alike. I have with me a little poem. If you haven't seen it, there'll be a copy. It's two pages; I'm not going to read it all.

"The Calf Path" - to paraphrase this, one day a calf ran off in the woods and the old farmer had to go and bring it back. After that, there came a hunter who followed the trail; after that, a wagon followed the trail; after that, a herd of sheep; after that, a wagon train, etc. And today the path of the calf is the main thoroughfare. Now are we guilty of this in our educational program? Are we following the path of the calf?

I think in curriculum development we must look at this and we must look at the individual needs of each student that we are permitted to have. I think that is the right word to say -- "permitted to have".

I'm moving to the next phase. I'd like to play the role of a teacher and I'd like to present to you my class. Give you a little case history of some of them. And to present to you this phase,

I'm going to use bottles for the students and the knowledge or skill that they have will be the water that's in them. So I'd like to present three (3) to you.

See this one? He's up to snuff. He's got the right amount; he's the good average student. Very good student.

Here's another one just like him. He's an average student, but he had trouble last year and has put the lid on. "He don't want no more ever what he's gettin'."

Now this little fellow has done pretty well but he'll never fit in the group. There's something slightly different about him; and we're going to handle him differently because he's not a group "fitter-inner". You can tell by looking at him. He's the wrong color, the wrong writing, and everything. He just doesn't fit in.

I'd like to present two (2) more. Now you can tell that these two are from the same family, same background and everything. This one is a good student; does all right. You can tell by looking at this that there's a little something wrong with him. Now, Mrs. Hoggrissle told me - she had him in class last year - she thinks that he's an unwanted child. In other words, he's an accident; and he got into my class by accident. If he stays in my class it will be purely by accident, because I'm going to get rid of him.

Now, here are two joys to have. Look how wide open they are. They're ready, willing and eager for anything. It doesn't matter what. Oh, if I only had a classroom full of these. Wouldn't it be wonderful?

Now, I want you to look at these two. They've got stuff in them and they've got lids on them. They're trouble makers. They were in Mrs. _____ - I better not use her name - class. Every year when I get students from that class I have to undo everything that poor woman does. If I could just get all this liquid out of them and get the right in. But it takes half the year to undo what she's done to them.

Mr. Sports, athlete. All he thinks about is sports. He's odd-shaped, all muscles, too big, doesn't fit in, and he'll give me trouble from the word go. And look, he doesn't even have the right color material. You can see it's all sports in the traditional color.

Now, here's one from the right side of the tracks. Oh, just a joy. But the trouble is that he thinks he's too good for us here. He's even got the wrong slightly colored material. He's got a top on, and when you take that off, it's even smaller.

Cute but dumb. It would be a joy to have her in class. She just sits around and makes the place cute. We will get along fine, but she's just about all she can take. But really cute; just a joy to work with and that's all. Cute but dumb.

He has got a physical handicap and we just don't talk about it. I don't want the rest of the class to know. There is not a thing in the world I can do for him. It is the administration's headache because they don't have a program for this type of person and we just let him sit here. My conscience doesn't bother me. It's the school's fault that he is not being helped.

Well, they are all about the same; came from the same background, but they come from a different school and I am not sure about the content. This one has the lid on. Not much is going to happen to him. I can't help him a great deal. Hope you can tell from this one exactly what is wrong. She talks. You can see its dental powders. All the time, talks all the time. You can't tell whether she has learned anything or not because it is all covered up with her gab and when she takes a test she just writes pages and pages and pages. So you never know.

Here are two lovers. You have got to watch them now. All they think about is boys and girls and you better keep your eye on them because if you turn around, you can't tell what's going on and we can't have anything like that. So you must watch these students. These two particularly. They've told me about those.

This is just an unlucky family. Just a poor child. You can see that everything about it is wrong. Wrong color and everything. Came from the -- well we don't even talk about her parents and the things that she does. We just don't talk about it. I hope that I can sit her by herself where she won't bother anybody else. Oh, I do hope that she doesn't come to school very much because she is just trouble all the way.

This one, oh, it's all right. We will get around to it later.

All of you have had this one; the medicine bottle. Evidently her uncle is a doctor. She can bring more excuses. She's always sick on the day of a test and never comes review day. She has a headache; she takes aspirin like they were going out of style and she is always a headache; she can just get her application and receipts and everything from anybody at anytime.

This one I would like to wait and introduce to you later. Now, after I have introduced the class, I would like to introduce to you the faculty or some types of faculty.

First of all, I would like to introduce the teacher who has all the degrees, all the training. Now, she may have never gone to college but one day but you would never know it to hear her talk. And she, or he, is well equipped - got a lot of information - loaded. About all they have got. She is going to say to the class, "Now class, pay attention. I am going to give it to you once; you get it." And so she just sprays them; just all at one time. Now, if they don't open up their lids and take it, that's just perfectly all right. I just can't keep wasting my material on you if you don't pay attention.

This dear teacher had teacher education courses and we will, I guess, call her "Trying or Dying". I don't know which. But she knows exactly how to do it. Someone has told her you can work with individuals and so she is going to. She is going to move around the room and work with individuals. She is just going to pour it on them. If it runs off, that's all right; if it gets in, that's all right. Now notice this little fellow a while ago. You notice, he has a handicap and he doesn't ever retain a thing. He takes it in but it just keeps going through. But that's all right, he got it. Now these are just real willing students here, but still you see it keeps coming out and by the time you get around to exam day, he doesn't know any more than he did the first day you had him. He has just got a slow leak. He is ready every day. This other joyful one, too, has a similar leak, similar trouble. But he is willing, cooperative. Oh, my! He would help you do anything.

These are the type of approaches that we have used. But you as counselors and all the others know that these two types will help some but you are going to have to take all the skill that you have. First of all, we have to find out, like getting you out of the box, how do you get his cap off. It may take a lot of tests. It may take a home visit. It may take - I don't know what, but we have to get the top off first. This one, it might even cause you to become interested in sports to get through to him and get him opened up. It might take a session with the coach. This one, where you will have to undo what other people have done. I can't get him open so we will have some failures. Here again, we want true success stories and not fictitious. Not like social promotion. But if you were to get the top off, you as a counselor may have to become the funnel to help that teacher - and especially in the case of the one that is so far above everybody. It is real needful but if that doesn't work too well, you will have to use the medicine dropper to get the material in here. But at least if we are putting some in, we are not wasting his time and we are not causing him to become lost in the educational world.

Oh, I forgot to mention one other type of student. Here he is. I had him in algebra one time and it was his third year to have it. He said that he was going to teach it next year because he had it longer than I. So, this is what he does. You turn your back and he helps with the class. That's all he is interested in - just to take over when you are gone.

I think these are the types of students and what we are trying to point out with the different shape bottles - some of them very close to the same, especially in the area schools. We have the advantages and the responsibilities to break traditions. We do not have as many formal things that we must do. We can let a student enter in at anytime, drop out at anytime. Therefore, we are trying to build prescription course outlines and each one of them leads to a payroll job. We hope he can study with us three months; he will be employable. If he can stay with us two years, he will be employable at a higher level. Now, this takes a great deal of change in

tradition and change of thought and approach. It also takes teamwork. We are constantly looking at this, but the teamwork approach takes a research development - finding things about our students, getting background information on them and being able to work with them as individuals. We have had the opportunity to have no more than 20 per instructor. I think it is coming in all types and all levels of education to work with the individual.

I would like to end by reading a paraphrasing of this story most of you have heard, "The Animal School".

Once upon a time the animals decided they must do something heroic to meet the problems of the changing world so they organized a school. They adoped the activity program and the curriculum consisted of running, climbing, swimming, flying; to make it easy to administrate all the animals had to take all subjects.

The duck was excellent in swimming. In fact, he was better than the teacher. But he made only passing grades in flying and was very poor in running. Since he was slow in running, he had to stay after school and drop out of swimming in order to practice running. This was kept up until the webs of his fet were worn and he was only average in swimming but average was accepted by the school and nobody worried about it, except the duck.

The rabbit started at the top of the class in running but had a nervous breakdown because of so much make-up work in swimming. The squirrel was excellent in climbing until he developed frustrations in the flying class because the teacher made him start at the ground up instead of the treetop down. He also developed a charley horse from over exertion and got a C in climbing and a D in running. The eagle was the problem child. He was disciplined severely. In the climbing class he beat everyone to the top of the tree but insisted on his own way to get up there and this provoked the teacher.

At the end of the year the abnormal eel could swim exceedingly well, run, fly, and climb a little and had the highest average and was the valedictorian. The prairie dog stayed out of school and fought the taxes levied because they would not add digging and burrowing to the curriculum. They apprenticed the children to the badgers and later joined the groundhogs and gophers and started a successful private school.

I thank you.

NOTE: See Appendix, Pages 155 - 161 for Handouts.

INTRODUCTION TO STUDENT SERVICES

Mr. Lee Rotenberry
Supervisor of Student Services
Area Vocational-Technical School
Nashville, Tennessee

Thank you Mr. Phipps and members of the counseling profession. It is indeed our pleasure to be with you this afternoon and to give you an insight into the vocational training in the Nashville Area Vocational-Technical School. The reason we are concerned with your particular job and the responsibility we have is that over half of the high school graduates do not attend academic colleges.

According to a survey conducted by Dr. James B. Conant, former President of Harvard College and author of The Comprehensive High School--A Second Report to Interested Citizens, 55.9% of the graduates of the 1965 class of some 18,500 schools did not go to four-year academic or two-year academic schools. So 55.9% of our high school graduates were either involved in vocational training or NO training. Dr. Conant, in an earlier book, The Child, The Parent, and The State, makes a very definite statement to us in the counseling profession. "The Attendant in the Serivce Station, The Leader in Industry, The President of a Big Business have the same responsibility and privilege when they close the curtain in the polling booth, and they are taxpayers. They are the ones who help us to initiate the vocational educational system, to develop our way of life, and to identify the responsibilities that we have."

In 1963, the State of Tennessee inaugurated a vocational training program which included the Nashville Area Vocational-Technical School. I do not mean that we waited until 1963 to have a vocational training program, but it was in 1963 that the school in Nashville was incorporated in the state program. Our responsibility according to the State of Tennessee Vocational-Educational Board is that we are to train, we are to retrain, and we are to upgrade citizens of Tennessee in order for them to become productive taxpayers and laborers--workers in the labor market.

We have one of the greatest advantages in the State of Tennessee and in Middle Tennessee by our natural resources, our citizenry. And because of our citizenship and those that are involved it behooves us of the Nashville Area Vocational-Technical School to prepare our students, to enhance our faculty, and to inform our locale, as far as the industry is concerned, of the three-phase responsibility that we have in fulfilling the need for training, retraining, or upgrading of our citizens. So this is our responsibility and herein lies the vast job that we have to do. We cannot do this job alone. The responsibility lies within the association of the counselors of our high schools and our junior high schools in the recognition and the wanting to do those things which are best for the 44 percent of our student bodies who

are going to an academic educational system and to the 55.9 percent who will not go to our academic school.

Our responsibility starts as soon as we can first have contact with those who are interested in vocational training. We do not always get them until after they have had two years in some of our academic colleges. And then we get them and they know what they want. They come to us and we try to do what we can to help them. Our students are not necessarily high school graduates, and they are not necessarily high school dropouts because we have college dropouts. Some cannot afford college and some are not accepted in our academic system. We get those who are retired from some other program and who want to go ahead. Nashville has not been hit by the closing of industry as some of our larger cities and larger Northern cities have been. Therefore, we have not had the challenge in the absolute retraining of employees. But this could happen to us. If we do a good enough job in the other areas maybe we won't have to face and cross this bridge because we use preventive maintenance on our labor force before it happens. So in our area of work, we need your help; we need you to know what we are doing; we need to work together for the benefit of our future taxpayers in Middle Tennessee.

In order to qualify a person in the state of Tennessee, it is necessary for a student to be 17 years old. If he has not finished high school he must have been out of high school for at least one year and must complete an application. He must take the aptitude tests and must have a job objective. There must be a reason for him being in school primarily because there is no tuition at the Area Vocational-Technical School. This is furnished by the state of Tennessee and by the taxpayers who make our jobs available to our student body.

Now within our school in Nashville we have 22 courses available in the buildings across the way which you will visit on Thursday and Friday. Quickly let me give you a rundown on them: Auto Body, Auto Mechanics, Cosmetics, Child Development, Certified Laboratory Assistant, Drafting, Food Service, Industrial Electricity, Radio and Television, Refrigeration and Air Conditioning, Machine Shop, Tool and Die, Office Machine Repair, Bookkeeping, Secretarial and Clerical in Office Occupations, Unit Record Equipment which is IBM or Data Processing, Nursing Assistant, Welding, Basic Electricity, and Watch Making. Now I have listed these rather fast because those of you from high schools have been given a catalog this year. Mrs. Holshouser visited twenty of the high schools about two weeks ago and those of you who have not had a catalog, we have one for you now or you will get one before you leave before the end of the week.

We are very fortunate in Middle Tennessee and in Nashville because of the courses that we have to offer and because of the association of the two schools, the Area Vocational-Technical School and the Nashville State Technical Institute being side by side in this area. We have a vast program to offer in the various fields of

education. Those of us in Middle Tennessee and specifically in Davidson County have more to offer and to keep our population educated and available for education and the education available for them than nearly anywhere else in the South or in the North.

We ought to brag a little and now is my time to do a little bragging. Just recently a man who represents one of the biggest industries in Cleveland, Ohio, visited with us in our facilities. When we had finished visiting our various classrooms, he came back and he said, "You would be surprised if I told that Cleveland, Ohio, doesn't have anything like Nashville, Tennessee, has and you are to be commended." We feel quite proud, but we feel humble because we have it and we feel like that it is a responsibility to use it. All of us need to be informed of what we have, how it is available and how we can use it for the very best purpose for those who are our young men and women and those who need to be retrained in order to make a better working population in Middle Tennessee.

Now Mrs. Nancy Holshouser will go through the process of testing and preparing the student for entry into the school. She has her degree in Home Economics from David Lipscomb College and has done work at MTSU. She is our little peach from Alabama. We are proud of her and thankful we have her. Then Mr. Cliff Huddleston, a graduate of Harding College who has attended Boston University as well as Peabody College and whom many of you know, will take the program from the preparation of the waiting list, the orientation, and the student entering school. We will then have a question and answer session so during the program if you have a question please write it down and then when we get to the end we will take your questions and have time to fulfill that responsibility.

We appreciate so much your coming, for the opportunity that has been ours to participate in this program; and so at this particular time, may I present Mrs. Nancy Holshouser.

RESUME OF THE COMPLETE GENERAL APTITUDE TEST BATTERY

Mrs. Nancy Holshouser, Counselor
Nashville Area Vocational-Technical School
Nashville, Tennessee

The test that we give at the Nashville Area Vocational-Technical School is the General Aptitude Test Battery more commonly known as the GATB test. It was initiated by the Manpower Development Administration in Washington, D.C. several years ago as an occupational placement test. This test is a profile of a person's natural abilities and skills.

When the applicant comes into our office he is asked to fill out an application. At that time, we have a chance to talk to him to see what his training goals are and to schedule him for the GATB test. The test is given every Tuesday morning and twice a month on Thursday evening.

The two booklets you are receiving are Parts I and II of the written examination. Please do not write in any of these. I want you to glance at them so you will be familiar with the information we use for testing purposes. I would also like for you to take one sheet of the tablet which is being passed around. If possible, everyone needs Book I, Book II, a brown answer sheet, a sheet from the tablet, and a pencil.

Please turn to Book I and look at the first part of the test which is name comparison or clerical perception. You will notice that in this part of the test the applicant has to discern between likes and differences in names. The names have to be exactly the same. Contractions and misspellings are counted as a difference. You will notice on the brown answer sheet that there is a section labeled "Part I". It is divided into two columns. The answers are posted on the answer sheet. A six-minute period is allowed to complete as many name comparisons as possible.

You may turn to page 9 in the test booklet. This section consists of simple computations in addition, subtraction, multiplication, and division. The answers are given in an answer column. The applicant is asked to make his computations, find the correct answer in the column and then post the answer on the answer sheet by blackening the circle of the same letter that is beside the correct answer.

Please turn to section 3 which is on page 14. This section is involved in spatial perception. It determines a person's ability to see plane objects in three dimensional shapes. You will notice that to the left of each of these plane geometric shapes there are three-dimensional objects with a letter over each one. The applicant is allowed six minutes to make his decision and post his answer.

On page 25 is the vocabulary part of the examination. The applicant is asked to find two words which are most nearly the same or opposite in meaning. That particular part of the test takes approximately 45 minutes to administer. At the end of this time a five-minute break is given. Then we are ready to proceed to the second part of the test which is Book II.

On page 3 of the second booklet there is another perception test where the applicant has to discern between visual shapes and objects. Only five minutes is allowed for this section of the test. The second section of the math test is on page 11. These problems require a knowledge of general math. In the last section of the second part of the written test the applicant has to match like shapes and sizes. The applicant has to find a shape in the upper box and in the lower box and post the answer. It takes around 30 minutes to complete the last portion of the written test. Before we proceed to anything else, would anyone like to ask a question about any of these two booklets?

I would like for you to take the sheet that has the squares and prepare to take the motor coordination test. Please listen as I read the instructions to you. . . . . You will notice that in the upper half of the page there are four rows of squares. You will have ten seconds to finish as many of these as possible. I will use the word "READY" for you to get your pencil above the box and the word "GO" for you to actually begin. Put your pencils above the fourth box. READY! GO! . . . . . STOP! How many completed two rows? Three rows? More than three rows? Now you are to move to the rows on the lower half of the page. You will have ten seconds to complete the second section of four rows. Get your pencils READY. GO! . . . . . STOP! Did you complete more squares than you did last time? Turn your page over. You will have 60 seconds this time to complete as many squares as possible. READY! GO! . . . . . STOP!

If you completed as many as 50 squares your conversion score is 62. That is not very good. If you completed 60 squares you have a conversion score of 82. That is much better. If you completed 70 squares you have a motor coordination skill of 101. That is very good. If you completed as many as 80, you have a motor coordination ability of 120. That is an excellent score. Is there anyone who completed more than 80 squares?

I appreciate your taking this part of the test. I think it will help you to see that this test is not geared for academic ability. It is geared strictly for occupational placement. There are two other parts of the test of which you need to be aware. I wish that all of you had a chance to take these tests because they are very interesting. The first one is referred to as the Finger Dexterity Test. I don't have a list of the occupational skills that require this and, unfortunately, I don't know all of them. But as an example, our classes in welding, radio and television, and watchmaking require agile finger movement. The object is to

move all of the pegs that are on the upper part of the board to the lower part of the board in a particular sequence. The test consists of removing one peg, removing a washer from the column, putting the two together and placing them on the lower part of the board. The applicant is allowed 90 seconds to complete as many of these as possible. The average raw score is around 25 or 30. Any one that completes more than 30 is doing extremely well.

The large board is referred to as the Manual Dexterity Board. This test is necessary for anyone who is required to do a great deal of work with the arms and the upper part of the body. The idea is to move all of the pegs that are in the upper part of the board to the lower part of the board. Three trials of 15 seconds each are allowed in this section of the test. A raw score of 90 would be considered average.

That is a very quick resume of the complete General Aptitude Test Battery. I apologize for having to move so rapidly through it. As I have said, this is not an intelligence test. This is an occupational placement test. There are deviants in the scores that you might be interested in knowing about. There is a six point deviant for the general score. The general score consists of one section of the math test, one section of the vocabulary test, and one section of the spatial test. There is a six point deviant for the vocabulary part of the test, a six point deviant in math, an eight point deviant in spatial, a nine point deviant in visual perception, a nine point deviant in clerical perception, a seven point deviant in motor coordination (which is the one you took), a twelve point deviant in Finger Dexterity and an eleven point deviant in Manual Dexterity.

Each occupation requires a different set of norms. These norms have been established by the Manpower Development Administration. After the student has completed the GATB test, his name then goes on our waiting list and remains there until we call him for entry into school.

Mr. Huddleston will now explain the orientation to the school.

STUDENT ORIENTATION

Mr. Cliff Huddleston, Counselor
Nashville Area Vocational-Technical School
Nashville, Tennessee

It is always nice to be back again with my fellow counselors that I have seen from time to time over the last six or seven years. We have been in many seminars together. People like Bob Vann, Bill Crawford, and others have been in seminars with me at the University of Tennessee in Knoxville, M.T.S.U., and other places. As I have been around to the high schools and visited with most of you I think that we have found a lot of things in common. Mrs. Phillips at Central High and I talk about my four years as a student at Central and how much it has changed. Since I moved back to Nashville in 1960, I haven't missed a single one of those Central High School reunions where we have usually had around 1200 people. I go out to Antioch to see Mrs. Marckam and I remind her that Antioch High was my first teaching job back in 1936. (I just aged myself, Mr. Sandlin.) I think we had ten teachers there and they paid me the enormous salary of "$720 a year." They raised me $5 for the next year and I said I didn't see any future in this work, so I quit. I went down and raised my right hand and was sworn into the Navy. I found out that the lowest seaman was making exactly the same thing that I was making but with fringe benefits.

Then I visit other people like Mrs. Williams out at Joelton, and find that we have a common interest in bike riding. Then I found out that Dr. Gilda Greenberg and her husband also have this common interest. I used to think I was the crazy one because when people see an old guy like me riding a bicycle they think he is a "nut."

When I go out to talk with the seniors of a high school or others, I usually try to convert them to vocational-technical education in three ways. First, I say that I recommend that you go to college if: 1) you have $12,000 because that is what it costs the average person to go through four years of college in this country of ours. This has been furnished by government statistics out of Washington. Okay, you can go through on $12,000. Some of you would say you can go through cheaper than that, but the average is $12,000. I heard a father speaking of sending his son through Vanderbilt say "Boy I was lucky; I got my son through Vanderbilt for $18,000." So you can see that the range goes way up and goes way down. 2) Then I say, if you are then willing to burn the midnight oil and in many cases many study all night before the exams. I have seen my daughter do that. I say that if you go to a college and don't have to do that, you had better get out of that college because it is not much good. Any education that is worth anything means that you are going to have to really work for four long years. This begins to discourage some of these seniors a little bit--the $12,000 and all this four years of work.

3) Then I say that you have done all of this, $12,000 and four long years of sweating it out, and you go by and get that sheepskin in your hand and say you have got it made. Then you go out and get that job and here is where the blow really hits. You then find out that the average college graduate is making less than skilled workers. Now these figures are right out of Washington, D.C., also. Now I am not talking about the lawyers, doctors, dentists, or veterinarians, but I am talking about the "average" person like me and you, who received a B.A. degree or M.A. degree in Guidance and Counseling, in teaching, etc. Now we know this is true because one of our old teachers that I knew came by the other day. He is welding now. He had a stack of vouchers and I saw them. When he is welding, he is making on the average of $520 a week. Now this is very unusual, but he is welding on a pipeline up in Indiana, getting a lot of overtime in a good union, but he <u>is</u> making $520 a week.

Once we get them here into the school, the first thing we do when we get them in at 8:00 a.m. is to welcome them to the school then tell them that it is not like the school they have been in. We treat them like a worker. We are the foremen--we are the bosses. We have no change-of-class bells. We don't even have a bell system in our school. At one time though we found out that after students had their morning coffee in our snack bar they were wandering into their shop or classroom a few minutes late. So, Mr. Sandlin said, "This is going to have to stop." If we let them get by with it at the school, they are liable to try to get by with it in their jobs. We didn't want to spend a lot of money on a bell system so someone said, "Let's hook it up to the fire alarm buzzer." So we did that. At five minutes to eight the buzzer goes off to let them know that they have five minutes to finish their coffee or eat their donuts and to get into their classrooms or shops by 8:00. If they are thirty seconds late, they have to come by the office and get a tardy slip and that costs them a whole hour because we can't sit around working out the minutes and seconds. Six tardies like that costs them a day. Three days would cost them their place in the school. We terminate them after the third day because we have got to get them in this habit of attending school and attending it regularly.

We then tell them what the counselors can do for them. We are here to try to help them solve any of their problems; from baby-sitting to transportation, rides or changing courses. We don't say we will solve the problems; as you know, we can't do that. All we can do is sit and listen very sympathetically and then try to <u>help</u> them solve their problem. If you don't think that these adults have as many problems as the kids that you deal with, then you are sadly mistaken because they have children, they have families, and some of them are separated or divorced and they have <u>all kinds</u> of problems. We have foreign students. We have had them from Columbia, South America, Mexico, India, and Thailand. One girl from Argentina could not speak any English, but it so happened that our clerical and filing teacher spoke fluent Spanish and we put her in this teacher's class where she could communicate.

After we tell them what the counselors can do for them, we then get into a little bit of the history of vocational-technical education in the state of Tennessee. We tell them that we have 26 of these schools and that we have been here on White Bridge Road for about three and one-half years on the grounds of the old Veteran's Administration Hospital. Before that, we were at Hume-Fogg for several years camping on the facilities of Hume-Fogg at night. We how have 83 acres, plenty of room for expansion, and we will be expanding as soon as we can possibly get the appropriations. We have a long waiting list for some of our courses and cannot possibly handle all the applicants. Remember that we have sixteen colleges and universities in Nashville but only one Vocational-Technical School. Now this is where the demand is. The state handed me a big job last winter. They assigned me to do an occupational survey of industries in Nashville in collaboration with the University of Tennessee. I was assigned about 150 companies: AVCO, Ford Glass Plant, Baptist Sunday School Board, and on down to one man operations. I became very enlightened as I talked with some of these personnel directors in the big companies like AVCO which have four personnel directors. They said, "We have got college graduates running out of our ears and don't know what to do with them." Some said that they had personnel with degrees working at $1.60 an hour. They said they needed specialists--people that are on the journeyman level. Actually, the hardest person to find is a person that is willing, ready, and able to work; to start at the bottom, that is loyal to his company, and loyal to his boss. That is a very hard person to find. If he has a proper attitude, he can be trained the way the company wants him trained. They said that they needed people with vocational training.

Now, I want these booklets passed out along with these cards. Our orientation is relatively short and relatively simple, but we are thinking about expanding it quite a bit. It is different at every one of our area vocational schools and nobody seems to have found the best method. We have deliberately tried to keep ours short, but we think we are going to add on some more features to it.

We tell these students when they come in that they are adults in a post-secondary school and then we go right into our orientation after we have completed our forms. This enrollment card is the first thing they fill out. We make two copies of it, one to send to the State Office and one for their instructors. Then we have them fill out two medical records. We get many people that have disabilities. We get people from Vocational Rehabilitation, from the Manpower Development and Training Office in the State, from the CEP Program--the WINN Program, as well as disabled veterans. About a third of our students are veterans so we have a great many things to do and say for veterans. We enter boys and girls right out of high school but don't get many except right at the end of the year and then we don't have enough openings. Those that are graduating now would have to come in as soon as the vacancies occur during the summer and during the fall.

We take the first hour in filling out the enrollment form, the medical history form, and the short form to signify that they have received the student handbook and that they will comply with the requirements therein. We then tell them that we need only one rule and that is to act as a lady or gentleman at all times. This covers everything.

Then we go right into the part of the school calendar which is on page 2 and is already out of date. We will have another one in the next few weeks. We tell them that our school is on a twelve months schedule. We are on a quarterly system like the colleges and universities with a break of a week or two weeks in the fall, two weeks at Christmas, and then nine weekends where we have a three day weekend. Then we tell them that the school is not closed according to the Metro School System during inclement weather. They should listen to their radio or television sets and if they don't hear anything, they had better come on to school. Of course, we make allowances for those that live out in the country. Some in other counties cannot possibly make it.

Then we go into our parking situation. Mr. Weld has been very kind to let us have the first one hundred spaces over here in the Nashville State Technical Institute parking lot. You see, our students are a lot richer than his. They all have jobs and we have many more automobiles over in our parking lot and cannot possibly park them all. So they have to filter over here where the poor academic students are. Our students, after school hours, are usually going into jobs like welding; or they go to the Ford Glass Plant to work, or many of the other companies around Nashville. Of course, I was kidding Mr. Weld. I imagine some of your students have quite good jobs also.

Now then, we tell them about the telephones and then we tell them about the eating situation. We get into a little bit about ecology and litter; about cleaning up after themselves in the snack bar, that we have a blind man who runs the snack bar who was specially trained in Arkansas to do this and that we don't run the snack bar--it is run by the State Department for the Blind. We tell them to clean up after themselves and they have been very cooperative. When you come over to visit the school on Thursday and Friday you will see that it is still almost as clean as the day we entered nearly three and a half years ago. Then, of course, the bookstore is operated over here at the Technical Institute for all our students. Mr. Weld has the cafeteria here in the Technical Institute but we operate it to train students in baking, cooking, food service management, restaurant management, and so forth.

Now we get into this business of appearance and I must admit that we have had some problems there. We got our necks into a noose not too long ago when we tried to enforce a rule against long hair. I know that you have not had this problem because you just let them go anyway they want in most cases. I have a seventeen-year-old who has long hair and it almost broke up my home because I tried to get

it cut. I almost threw him out but my wife intervened and said he would get over it. Well, I hope he does.

In the school our rule is that if you are required a certain mode of dress or appearance in your chosen profession you will dress accordingly in your shop. We tell drafting students, for example, that architectural offices usually require a shirt and a tie. Therefore, our students are required to wear these in our drafting department. Of course, we have some girls and this makes things a little bit different. Up until a few months ago we allowed no pantsuits in our school, but we noticed that the ladies in the local banks and department stores were wearing them so we now give written instructions during orientation to all the ladies on the type of pantsuits that we allow in the Vocational-Technical School.

The next item is attitude and conduct. We have never had any problem with these. We tell them that about two years ago we had two students back from Vietnam in our night radio and television classes. They got into an argument and one of them swung at the other and luckily he missed. Both students were suspended and lost their veteran's benefits. The business of safety is very important because we have some dangerous situations such as explosives, gases, and high speed machines. We tell them one of the easiest ways to get terminated is to be caught without wearing their safety glasses when he enters the course. They must have safety lectures, movies, and slides and then sign a paper that they fully understand the safety regulations.

Regarding course and program activities, we tell them that they can stay for the full length of a course and get a diploma. For part of a course, the student may be awarded a certificate if there is a Dictionary of Occupational Titles number that will fit their particular part of the course. For example, a welder would normally take a year to finish his course, but in six months he can become a "tack welder" which would entitle him to a certificate as a "Tack Welder." He could then go to work at the Nashville Bridge Company or at AVCO and work in the very simplest type of welding. If he wants all four types of welding and get a full-fledged diploma from the state of Tennessee, he must complete the full course. This applies also in the other courses.

Next, we get into the smoking problem. Those who are right out of high school are very happy to learn that they don't have to sneak out behind the gym anymore to smoke. I tell them that they can smoke in most places provided that the instructor will allow them to do so. Then we get into a lecture on the evils of smoking. We tell them about all the people that are dying with cancer, that two million people have emphysema, and that many people have coronary diseases and that foreign countries are far more worried than we are. These countries will not allow cigarettes to be sold to a teenager or let cigarettes be advertised. Then we tell them if they would save that 30¢ a day for one package of cigarettes invested at six percent interest that one of the country's

leading economists has found out they would have a little over $33,000 at the age of 65 when they retire. Then I say go ahead and light up a cigarette because I have never convinced anybody yet that they should quit smoking. They usually think that the other person across the room is going to die with cancer or some of these other diseases as a result of smoking.

I think I am going beyond my time so I will sign off. Are there any questions now about anything? If you want one of our Area Vocational-Technical School catalogs, we have several up here and you can take one as soon as this part of the program is over.

STUDENT SERVICES

Paul Morrow, Director
Student Services
Nashville State Technical Institute
Nashville, Tennessee

Nashville State Technical Institute is a two-year college level institute for the preparation of business and engineering technicians. Our courses all carry credit, but transfer of credits is not the object. Our courses are designed to provide terminal training which will enable a student to obtain a good position after two years and be productive on the job within one month. The fact that they have college credit is a very good fringe benefit. Because we are college level, a student must have either a high school diploma or a GED to enroll. Other than that, there are no other admission requirements. We do require the ACT for guidance and placement purposes, and we have diagnostic instruments for use in placing students in our remedial programs. More will be said about these at a later time.

Nashville Tech provides numerous personnel services designed to make the educational experiences of our students profitable and satisfying. The faculty and administration recognize that the central purpose of the Institute is to provide an environment wherein each student may achieve optimum development -- intellectually, socially, and physically. The services, organizations, and activities are provided by the Institute as means of contributing to the total growth of the individual.

We realize that each student is an individual with his own attitudes, ideas and his own unique set of developmental tasks. Just plain old problems if you will, and no teacher, department head or administrator is ever too busy to help a student with any problem. Guidance testing and counseling services are provided through the office of Student Services to help assure maximum results from the student's opportunities here at Nashville Tech. After July 1, there will be three full-time counselors here at the Institute with training appropriate to meet almost any situation which might arise. All counselors are available to any student by appointment, but we try to get to know the students well enough that they will just drop in or stop us in the hall or anytime they might have a problem. I believe that you defeat your purpose if you require an appointment.

The Student Services office administers the financial aid programs here at Nashville Tech. We have four kinds of financial aid at this time. We have the college work-study program where a student works during the year here at school and earns enough to pay his expenses; an educational opportunity grant which gives a student a lump sum grant with no strings attached except that it must be matched 50-50 with some other kind of financial aid; work-scholarship grants which pay the maintenance fee for

the student; and federally insured loans through the Tennessee Educational Loan Corporation. This past year, about 15 percent of our full-time students received some kind of financial assistance through the Institute.

We have various social and professional extracurricular activities. Among them are student chapters of the various professional societies and interest clubs such as a Photography Club, an Astronomy Club, a Radio Club, and Audio-Recording Club, and many others. Also we are in the process of organizing some intramural sports activities. These things are basically to get the students interested in the school and school related activities. Because being a commuter school it is very difficult to generate any school spirit, and if a student is interested in his school he will do better in his academic work. Other social activities arise from time to time such as plays, dances, picnics, etc.

We do have a fine print shop here in the building, which you will see later, and as a result, we publish our own news magazine and yearbook. Students and faculty advisors prepare these two publications in their entirety except for binding the yearbook. These two activities and their product have done much to create interest among the students.

We have a Student Council and a House of Representatives. This past year was an organizational time and the Council was not as active as it might have been, but we expect some good things from it next year. Each class also has its own officers.

The Institute is VA approved, and this past year we have had as high as 40 percent of our student body receiving VA benefits.

I would like at this time to give you a few statistics about the past year and the students we have had. Enrollment was as follows: Fall - 398 (this is total day and evening students); Winter - 393; and Spring - 333. We have had 58 dropouts by actual count from a total enrollment for the year of a little over 500 or about 10 percent dropout. At the end of winter quarter we suspended 50 students for failure to maintain a two-point average and another 10 percent for academic reasons. This makes a total of about 20 percent who have left school.

On the other hand, we have had about 30 percent of the student body on either the Director's List or the Dean's List each of the three quarters.

Of the total enrollment for the year, less than 10 percent were female, and this caused a little morale problem for so many male students. We hope this improves for next year.

Of the total enrollment, about one-third are married. The mean age is about 24. About two-thirds are entering higher education for the first time. Black students make up about 16 percent of the enroll-

ment which is a little less than we expected, frankly. About 85 percent of our students come from Davidson County. About one-half of our students are studying data processing and about another one-fourth are in electronics with the remainder spread among chemical, mechanical and industrial engineering technologies. About one-fourth of our students this past year submitted ACT scores. Next fall all students will be required to take the ACT before admission. The mean composite score for last year's students was 18 which seems to be an appropriate score for a student who expects to do well.

For students who are not so well prepared, we offer an extensive program of remedial instruction in math, English, physics and reading. You will hear more from these later in the week.

Besides what I have already mentioned, Student Services has the responsibility for graduate placement and student recruiting which is how I have met many of you already. Next year we will graduate our first class of, I hope, 60 or so, and there could be no greater asset to this school than to have those people appropriately placed and doing good work for their employers. So, naturally a great deal of time will be spent on this function next year.

So far as counseling goes, the primary problem we have faced this year is academic deficiency. Many students did not realize how difficult our program would be, especially the math. Math is a major element of all our programs and without a good background in math, passing the major subject is very difficult if not impossible. Consequently, academic problems have been uppermost.

We have had very little in the way of vocational guidance or disciplinary problems. Basically, the students who enroll at Nashville Tech know what they want to study and why they are here. That one fact eliminates a host of problems. So far as drugs are concerned, we have had only one incident in which actual materials were found. I know of several students who are taking some type of drug, but unless they cause some type of disturbance or come and ask for help, there is really little that can be done. But, I repeat, we really have had no problems with the students. This is a little surprising; at least I didn't expect it.

I know I haven't used up my hour, and I have probably omitted some things you would like to know. So if you have questions, we will try to answer them.

INTRODUCTORY REMARKS

Guy E. Phipps, Registrar
Nashville State Technical Institute
Nashville, Tennessee

One thing that was discussed in the meeting when Mrs. Pease, Dr. Greenberg, Mr. Sandlin, Mr. Morrow, and I met was follow-up methodology. We hear more and more about accountability. I have been in the educational system for over twenty years and most of this was spent in the high school, some in college, and some with the State Department. We have never really been held accountable. I am referring to how many dollars went to training and getting students ready to go out in life to start earning a living to put dollars back into the economy. We just have not been held accountable, and it is going to be hard to do it, especially in education; but the public is going to demand it more and more.

Vocational-technical education has been hit faster on this than anyone else because it is probably easier to measure, but in the next few years all of us will hear more about accountability. How much money did we spend to get these students out? How much money is this student putting back into the economy? Follow-up methodology needs discussing, and we thought it would be good to listen to a man from the State Department of Education and Area Vocational-Technical Education and hear him talk about how we in vocational-technical education are doing follow-up so we can be accountable for what some of our students are doing. We have with us Mr. Jim Judd, Supervisor, Area Vocational-Technical School, Division of Vocational-Technical Education.

FOLLOW-UP METHODS AND PROCEDURES

Jim Judd
Supervisor, Area Vocational-Technical Schools
Division of Vocational-Technical Education
Nashville, Tennessee

A little boy and girl were playing a game, and they decided that they wanted to play hide-and-seek. The little girl said first, "I'm hiding." The little boy said, "I'm trying to find you." The little girl said, "I'm still hiding." The little boy said, "I'm going to find you to kiss you." The little girl said, "I'm hiding." She thought a minute and said, "In the closet."

I am taking Paul Robertson's place today. Paul is in charge of our records and record keeping. I'll show you a picture of Paul later in the program. First of all, all about you counselors. Thank you for allowing me to be with you. I realize the tremendous jobs the counselors have, the lack of pay, and the time spent in making full use of human potentials. We are full of praise for all of you, for all you do when nobody is looking. We are full of praise for you for what you are.

> If I could give you medals, I would give you medals for the nice deeds you have done that nobody noticed; medals for the times you cared when nobody else did; medals for the times you helped and no one knew.
>
> For you ribbons, ribbons for trying new ways and discovering new ways to help people.
>
> Prizes for you, prizes for listening and not talking, for seeing good things in a person that others might miss; prizes for helping those who need you when others go the other way.
>
> Roses for you. Roses for making others happy for helping them with their troubles, for caring when nobody is looking.

Anytime I can talk about some of the things we are doing in the area school system and exchange ideas with those that are interested in training people for the world of work, then I always go back to my office with an attitude that makes my job more meaningful.

Before I go into the follow-up system, if I may, Guy, pass these out (Pass-outs of Area Vocational-Technical Schools Catalog). These are catalogs of our Area Vocational-Technical System. There are thirty (30) of them.

I will have to do a little background work before getting into the follow-up. Last year, 1969-70, we served 20,000 people. Six thousand and five hundred post-secondary trainees attended our schools (27 schools).

We served about 10,000 in supplementary programs. These are programs for people who are already on the job; persons come into our schools for updating and are given short-term courses to either help them in their jobs, or to give them a higher job placement with more pay. In our part-time preparatory programs, we served about 3,200 people. We had about 300 secondary students in Oneida, Ripley, Hohenwald, Dickson, and Crossville.

If you look in terms of follow-up at persons exited from school, we have to eliminate part-time and supplementary programs because of lack of funds. In 1971-72, we predict that we will serve some 27,000 people in our 27 schools.

I am pinch hitting for Paul Robertson, who is on vacation. He is not able to be here. He is in Florida in the gritty old sand and in the terribly hot sun. In his absence, I was able to secure a picture of him. I want to let you know what he looks like so that you'll recognize him when you see him (Picture of a fierce bulldog). You will notice he has sharp teeth, beady eyes, and a big head and told me "good luck". That is him. We work in the same office. We are squeezed together up there. If you want to know anything about records, he is "Mr. Paul Computer".

Our program is designed to meet a person's needs. To explain some of these needs, each Area Vocational-Technical School is a training center designed to serve both youth and adults from broad geographic areas. A person's desire to prepare themself for employment in trades, technical and other occupations will find the area schools a program of instruction specifically designed to meet their needs. The area schools enroll both those who have left high school and those who have left the full-time school program. The area school counselor keeps in close touch with those who need advise with regard to their vocational objectives, progress in their class, and such outside social and emotional problems which might effect their progress toward their goal.

For those who stay in school for a short period of time, a letter might be obtained from the school superintendent showing the amount of quality of work done. For those who complete a given unit in a course, a certificate of work is issued upon request. The diploma should be the goal of most of those who enroll in school. The diploma is only issued upon completion of one year or more work. In some courses, two years of work is required, but credit may be given for previous work provided confidence in that work is shown by that trainee. All schools maintain close communication with the employers, both in the local community and statewide. The result is that those students who stay in school until they complete their courses are reasonably sure of the employment.

If you have a question while I'm talking, go ahead and break in and I will try to answer them. "It has been more than a hundred years since 1940." A lot has happened, and we hope that we are a part of that. Our programs are designed to prepare a person for employment;

to upgrade the skills and knowledge of persons who have already entered the labor force, and we hope that this is with the change of times.

In certain ways, all persons are alike. When they are born, they are dependent upon others, and have one heart and two kidneys. Some are alike in terms of sex, the kind of language patterns they acquire, the development is unique in terms of his genetic pattern, the kinds of past experiences he has had, the way he sees himself in terms of his personal aspiration and what he wants to become.

Our schools, we hope, have helped a person see his personal aspiration, to become what he wants to become. We can only determine to some extent these answers through follow-up of an individual after he has left to the world of work.

This leads into some of the things we are going to do in follow-up in the area schools. Look at these pass-outs that I have. We will have to do follow-up for a period of five years. Maybe within five years we can determine whether we have helped the person to become what he wants to become.

Most of you have seen the Student Information Card. You have a section that states Area Vocational-Technical Student Information. Every student that enrolls in one of our 27 Area Vocational-Technical Schools fills out this side of the card; they will not fill out the other side. This information is then sent back to the state office, and the school may duplicate to keep copies for themselves. The information is placed in a computer. If I may, I will give you a sheet of this (Pass-outs of computer printout). This computer printout gives us our first information. It is held on each student. As a student completes a particular program of study, this is sent to the state office to Mr. Paul Robertson. This change of status indicates, if you will notice, whether the trainee is a non-completion or a completion. It has various indicators. It also gives a mailing address for this student. The printout gives the name of the student, social security number, status, number of hours trained, non-completion for poor attendance, lack of progress, military, illness relocated, financial, disciplinary and other. In completion, you will notice students DOT Code. Now this gets into the need for a little bit of explanation (Dictionary of Occupational Titles). Our Area Vocational-Technical School System is set up to offer students various jobs. We communicate with Manpower, Employment Security, Department of Labor, and Health Education and Welfare through the Dictionary of Occupational Titles. In your catalog, (Area Vocational-Technical Catalog) you will find on pages 21, 22, and 23 some of the schools and programs offered to trainees. We have not included in the catalogs the DOT Code number. After we get the change of status form (Computer printout) on a student and after it has been determined that a specific program has been completed, we at the state office will put the DOT Code on it.

The first year we used a machine preparation follow-up, and I will pass these out. Take one about every other person. You'll find that this is a follow-up used for mailing to the students. These were sent to the instructors in the school, to be signed by that instructor of the student, then to be mailed to the student. You will notice that there is a section at the top that is empty. The original sheet sent to the student says:

Dear Debra:

We at the State Area Vocational-Technical School now need your help. We are trying to measure the value of training programs to the success of our students. Debra, a couple minutes of your time will be of much value to us. Please check the requested information below and return this letter as soon as possible. Your responses will be held confidential and will only be used to evaluate and to improve our programs. Thank you for helping us.

The instructor signs it. An ex-trainee getting this from the instructor, we hoped, would be better than the State sending one out from Ben Hirst, Charlie Dunn, or Commissioner Stimbert. You can see some of the things that we are asking for. First of all, we were asking for information concerning employment status. It has a place for name of the employer, the city, state, and the job title. It had a place to check the hourly rate as approximately $1.60 or less all the way up to $3.00 or more. My employment is full-time, part-time, my work is related, not related. Then, after the employment and salary range is given we wanted to know how this person rated the school. Please rate as: above average, average, below average. How did the ex-trainee evaluate the instructor: instructor's knowledge, instructor's ability, ability to obtain job help.

Now, this follow-up was not good enough, we felt that some change had to be made. Does anybody want to know how much response we received? We received 30 to 35 percent response from the 6,200 that left school in post-secondary education. The instructors helped us when we didn't have the proper information. We would give them the letters, and the instructors would address them and send them out. The response was not what we wanted. We would like 100 percent response. We have to go to something else. This is not completed. It is tentative. We hope that this next follow-up will do the job (Pass-out "Happy Birthday" follow-up).

HAPPY BIRTHDAY

You entered our school to learn a trade;
You obtained the skills and had it made.

You've been out now, for a little while;
And we'd like to know if now you smile.

As a result of the training you did receive;
Is your pay check bigger, as we like to believe?

Please complete and return this form, Okay?
And may you have a HAPPY BIRTHDAY!

Do you think this would get your attention! Open it up. We have asked the trainee to give employment status; full-time or part-time. Last October we contacted them with the first follow-up, so now we are asking them what has happened since October 1970. Not whether or not he changed employer or job title. The new follow-up has a place for the new job title. Payroll job title. Okay, they know what their payroll job title is at that particular industry; we would like to compare it with one that we trained them in at our school. Other information found on the form: After employed I received a pay raise within one month, six months, twelve months, over twelve months. It gives you a place per hour, per week, per year. I feel the training received at your school has been helpful. We are also wanting the ex-trainee to evaluate our school, how they felt about it; is he currently receiving or have had additional training. We have supplementary courses. The ex-trainee can go back to school, to colleges or universities, or come back into this supplementary program of ours to upgrade themselves. We also want to know if they might get on a higher pay scale or upgraded on their job by taking supplementary courses.

Other information may give a place for the employer's name, city, state and zip. Is the person currently seeking employment. If they say, no, why. Okay, but if they say yes, then something is wrong. We have failed somewhere; either that, or they are just not anxious to get a job. Lack of jobs might be a reason. That would have to be looked into. I feel that the training received in your school was helpful in my past employment, yes ___ no ___. I'm currently continuing my education. All these questions are interesting to us. Comments.

NOTE: See Appendix, Pages 162 - 165 for Handouts.

INTRODUCTION OF EDWARD H. KRIEL

Edward L. Weld, Director
Nashville State Technical Institute
Nashville, Tennessee

Edward H. Kriel is Director of Industrial Relations for Aladdin Industries, Inc., one of the largest industrial employers in Nashville. For the past twenty-five years, Ed Kriel has been with Aladdin Industries in managerial positions concerned with personnel and industrial relations.

Mr. Kriel did academic work at Northwestern University, Chicago, Illinois. He was a Captain in the U. S. Army during World War II.

Mr. Kriel's interest in vocational and technical education are indicated by his membership on the following committees:

Metro Public Schools Machine Shop Advisory Committee
Industrial Arts Education Committee
Nashville State Technical Institute Advisory Committee

In addition to these committees, Mr. Kriel has been an active member in a number of organizations and on a number of committees, including the Advisory Committee of the Master of Business Administration at the University of Tennessee, Nashville.

ALADDIN INDUSTRIES, INC.

E. H. Kriel
Director of Industrial Relations
Nashville, Tennessee

That was quite an introduction. I am sure that if my wife heard it she would wonder why I cannot handle a hammer any better than I do. I know it is a little bit early to tell stories; but I heard one a short time ago, and I think it is related somewhat to the communications field. Since we are involved in the type of program that uses communications effectively, I thought I might tell you this. It seems that there was a man in Chicago who owned (like I said it is a little bit early to tell this type of story) a cocktail lounge. Some of his customers were primarily people who could neither speak nor hear, and this was a very regular group of customers that gathered every evening. One night a friend of his visited him and was looking around the lounge and complimenting him on what a fine looking place it was, and he was so interested that the owner said, "Look, I have to go out for a couple of hours so why don't you take over for me." The friend said, "I could not do it; I do not know how to communicate with these people." The owner said, "They just order two drinks--when they hold their right thumb up they want beer and when they hold their left thumb down they want champagne." "Really," he said, "I do not think I could do it." The owner said, "Come on, do me a favor, I have to go out so how about helping me out." He said, "Alright, I will." "Remember now," the owner said, "[illegible]er--champagne." So the owner left. The fellow was taking care of his business for him, and the customers were getting along famously having a good time, drinking their beer and champagne, and they were just having a real good time. After a little while, after everyone had been served a few drinks and was feeling pretty good, one fellow in the back of the room waved his hand like this, and the man that was taking over said, "Wonder what that means?" The man that was taking over waved back to him. Then he saw someone else in the other corner doing this and before long the whole group was waving their hands like this. So he thought they were just having a good time and having fun. Before long the owner came back and saw these people waving their hands and he said, "My gosh, what have you done?" The fellow said, "Only what you told me, served them beer and champagne." The owner said, "Yes, but you have got the whole bunch singing and they will never go home." This goes to show you the problem you can have with communicating.

Since you are going to be touring our plant Thursday afternoon, I thought I would brief you a little bit and give you some history of Aladdin. Some of you may know about it; but for those of you who do not, I would like to tell you a little bit about our company and some of the things we are doing that may be of interest to you. Aladdin was formerly a Chicago firm and started in business in 1908 in Chicago, Illinois. Kerosene lamps--I am sure none of you are old enough to remember how kerosene lamps were used--I do. We were primarily a mail-order type of business. We did not do much manufacturing at the time. We purchased parts and did a little assembly work in Chicago and shipped these things out to small towns, primarily hardware stores and general

stores. The business continued at this rate for some years and about 1927 we purchased a glass plant in Alexandria, Indiana, in the central part of the state. The reason we purchased this plant was because they had been supplying us with glass chimneys for kerosene lamps, and they went into receivership. Mr. Johnson, who was the owner of the company, decided to buy the plant in Alexandria. So we moved our manufacturing operation to Indiana, and at that point we really started to become manufacturers. We not only made glass chimneys for our lamps but we made other parts for kerosene lamps and a few other things. This went on for a few more years, and we got interested in vacuum bottles. At that time, American Thermos controlled some 80% of the market. We were just beginning, but we worked at it hard and in a few years we made a pretty creditable bottle. But, of course, we had to stop manufacturing bottles for a while during World War II; however, we continued to make our kerosene lamps. At the end of World War II, of course, we got back into the bottle business again. By 1949 we had reached the point where our bottle business had grown. We had to look for another location not because we were having problems where we were, but the nature of our business had changed; we had difficulty in distribution, our sources of supply were difficult, there was a shortage of labor, and there was a transportation problem--this was a very small town. So we looked around for a place to locate and after looking at many cities around the United States, we chose Nashville and lucky for us. In 1949 we opened our first operation here. During the next two years we moved the balance of our manufacturing in the United States to Nashville. We had an electronics division in Chicago which we moved down here in 1951. In 1952 we moved the balance of our operation from Indiana to Nashville, so we have been here now about 21 years. When we came to Nashville in 1949, we employed about 200 people, and we had about 8 acres of ground and about 125,000 or 150,000 feet of floor space. Today we have over 1,200 people. We have about 25 acres of ground, and we have about 650,000 feet of floor space, and we are in the process right now of putting up a new building about 80,000 square feet. Thursday when you are out we will try to get a bird's eye view of this.

We are the leaders in the thermos bottle business today. We came from a little manufacturer to a good sized one. We make a great variety of bottles and lunch kits. I am sure many of you have seen them. I hope all of you use Aladdin bottles and lunch boxes for your children.

Our electronics operation is rather unique. We are in the components business, and our customers are people like IBM, General Electric and National Cash Register. We make components; we probably have some of our components on the moon, and we are sure that all successful flights were ones that had our components in them. We make a variety of transformers, inductors, filters, and things like this. We will show you what some of these look like when you go through Thursday. They are tiny, micro-miniature type components that are used in electronic equipment.

A much newer part of our business today is what we call Temp-Rite System. If they were not so large, I would have brought some with me here to show to you. This is what most people refer to as a tray. It is a vacuum tray insulated with polyurethane in a special plastic shell

sealed and has little compartments in it in which food is placed in little plastic inserts that are disposable. These trays can keep food hot or cold for three hours. These are primarily being used in hospitals but the airlines are also using them. If you fly Piedmont or Allegheny, you are very likely to use one of our trays. The trays themselves are not disposable, but the inserts are--these, of course, are something like bags you can dispose of. The trays can be put into a dishwasher and used over and over again. The life of these are probably about a year; although we do not know exactly. We are fairly new in this business, and we have not had a chance yet to gather enough data to be sure. The principle of the thing is that it is a stacking process--you stack one tray on top of another and they lock in position. There is a control for heat or cold. If you take one compartment and put a steak in at a temperature--let's say of 180 degrees, three hours later it would be 140 degrees. If you are familiar with cooking steaks--I know you are--you know that 140 degrees is pretty hot. Right next to that is another compartment in which you could put ice cream. Put it in the tray in a frozen state, and three hours later it will be just at the right temperature for you. In each compartment of the tray this control exists and this is the principle of the whole thing. There is no transfer of the heat from compartment to compartment in the same tray. They are usually stacked in 10's. They can be strapped up and carried or wheeled around on a cart. When you are finished with them, they can be put back in stacking position and away they go. The advantage of these at a place like a hospital is that when everybody has a different menu they can prepare these things without having a definite timetable for preparation. They could start at nine in the morning preparing these trays and stack them up and put them off to one side. At eleven or twelve, whichever is eating time, they merely take them apart and start serving the patients. It has a great market. We recently made some arrangements in Germany to use them in hospitals there. We have a contract with people like Holiday Inn and Ramada Inn. A lot of the catering people are using these trays. This, as I say, is the newest part of our business.

This is a little sidelight--talking about something that we got involved in recently. You probably read about our interest in the Metro Center, an area in North Nashville along the Cumberland River where there is about 800 acres. One of our subsidiary companies, Pathfinders Resources, Inc. formed a partnership with a building contractor here in town to promote this area up there which will be a research center, park center, industrial, educational, and residential center. It has a great potential and we are happy that we are a part of it.

To give you an idea of what our work force looks like at Aladdin, the last report I had we had 1,216 people, and it was divided in this way; there were 752 females and 464 males. In spite of what people say, I think females are dominating our plant. In our management group, we have 221 people. We have what we call our technical and office group, and these are the people we will be talking about some this morning and you will get a chance to see Thursday. We have 162 people of this kind,

and this is split in this way; 104 females and 58 males. Here again, this 162 breaks down into 74 people who are technical people and 88 people that are considered clerical with various degrees of skills. The technical people are involved in jobs such as technicians, inventory control people, tool engineers, junior designing engineers, model builders, data processing technicians, and for some strange reason it also included executive secretaries. The clerical group would, of course, be clerks, keypunch operators, stenographers, some category of secretary, and a wide range of general type clerks. What we call our wage group, people who work out in the plant, we have a total of 833 in all three divisions; thereare 355 females and 475 males. This group--I am going to divide them into what we call Consumer Products and Electronics because there is a different end product here. In our Consumer Products Division we use people like tool and die makers, machine builders and erectors, machinists, equipment technicians, maintenance technicians, utility men, group leaders, and setup men. Our Electronics group has a different category called ceramic technicians, complex mold and tool makers, inspection technicians, mechanics, and some electricians. Now this is a broad category of the types of people that we employ there. Some of these probably mean something to you. You probably have heard these or perhaps seen people like this before in this kind of work. Many of them are peculiar to our type of business. You will find in most businesses whether it is ours, DuPont, Ford, or AVCO the nature of their business pretty well dictates some of the skills they are going to have. We, for example, do a lot of work with glass. In our bottle business, we do not make glass but we fabricate glass; you will see this Thursday. We take two pieces of glass that we purchase and form them into what looks like a jar and we weld the open ends together and fill them with silver nitrate and exhaust the air from between the layers of glass. We finally seal them up and have what we call a glass filler. Now this is a process in itself and I doubt if you will find two or three companies in all the United States that will do what we are doing with glass. So we have developed the skills and techniques and equipment to make this glass for use and this came about over many, many years. Our chief competitor is American Thermos. Since they were the leaders once and we are now, we need to hold our position. We also have a good many processes involving plastics and the jackets for our glass filler, the part which you see when you go into the store. This is what we call an injection type of plastic molding--to give you an idea of the cost involved in some of these things, the mold to make a plastic part could cost as much as $25,000. This would look like a lot of metal put together--it would have a cavity unit which the plastic goes into in the shape of a cup or stopper or glass jacket.

We also make lunch boxes out of plastics as well as metal. We decorate these things with a very clever type of printing process that we developed ourselves. It took us some two or three years to develop the idea which originated in, I think, Germany. We brought it to the United States and were the first ones to decorate on plastics for thermos bottles. By decorating I mean-you have probably seen some of our lunch boxes and bottles for school kits with characters on them. Well, on the metal jackets, this is lithographing and this is a printing process-very expensive. We used this for many, many years and almost exclusively now

we are making jackets out of plastics and are duplicating what used to be done on metal on plastics. The artwork that you see is little characters, you know Disney characters and Gunsmoke-all of these people that we watch on TV or see in comic strips. These characters have been put on these jackets. We also make a bottle that is all metal and does not have any glass in it. These are called Stanley bottles. We purchased this business from a company about six years ago up in New England. The company was having a great deal of trouble in their manufacturing and marketing. It was the old Universal Company who made percolators, toasters, and things like that. We purchased the Stanley bottle business from them. This is an all metal bottle that had an outside shell made of cold, rolled steel and the interior was made of stainless steel; and it is welded together. The air is exhausted from between the two metal cylinders and then is sealed, polished, painted, and is a very attractive model. It is called the Rolls Royce of the bottle business. They cost about five times what a bottle with a glass filler would cost. It has a five-year guarantee, and they are virtually indestructable. You can almost run over them with a truck, and you might dent it; and it might not look too good, but it still works. Any of those bottles that are sent back to use with a problem we feel is our responsibility, we replace free of charge. To just get an idea of the difference in retail cost, a quart Stanley bottle would retail for about $17 or $18. A quart glass bottle would retail for about $3. That is about five times as much. They are very attractive bottles. They are heavier, of course; and like I said, they have a five-year guarantee. People like truck drivers, hunters, and fishermen who are in need of something durable prefer these types of bottles. They make excellent gift items because unless a person really needs something like this he would not spend $17 or $18 for a bottle.

In our Temp-Rite server business, products which are made almost entirely of plastic, the processes there are what we call vacuum forming. We form trays and inserts at a very high speed, almost completely automated type of operation and because we are still in a state with this where we are not letting any competition know about what we are doing, you won't be able to see this operation Thursday. We will show you a lot of the trays and give you a good insight as to what they are made of and how they are used and so on.

Back to our electronics business for just a minute-as I say, this component business is mostly a micro-miniature type of component. I am not an engineer and cannot talk to you in engineering terms, but I mentioned the kind of equipment they are used in and we do use such things as coil winding, wiring, assembly, punch press work, etc. We even make a powdered iron core that we call a ferrite core. This is the core of a transformer or an inductor and is a very basic part of a component. We use lots of girls in the assembly unit, inspection, and for machine operators.

We employ technicians in this type of work. I am telling you this to give you a background for what I think you can do and we can do to improve and develop the kinds of technicians and craftsmen we need in Nashville. We attempt to do much of our own training. Because for many years we did not have adequate training facilities in the Nashville

area to provide the types of technicians and craftsmen that we needed. I think the fact that so much more industry has moved into this area-with a demand for people like this, people who just come out of high school and are looking for a skill of some kind to use or people who did not finish high school. We provide some training, but, of course, we have limited facilities; and we would much prefer to have you provide us with the people that are trained or at least given the basic training so that we can go on and develop technicians. There are many jobs where people have to develop skills with their hands and skills of their mind. Jobs--that require a lot of mathematics, ability to draw, people that have imaginations, people who are interested in seeing things that they can develop.

Our glass machinery and glass operation is as unique as you will find anywhere in the United States. Our automated process--we have developed almost all of it ourselves. We started from the drawing board with an idea that had been put down on paper roughly and someone else got it and blew it up, as we say, and divided it into segments of pieces of equipment or a line or process and people started to build it. We started out many years ago building equipment like this and doing it just for experimental purposes. We did it to see what actually could be done. We proved to ourselves that we could develop and produce a bottle that would be the best in the business and we accomplished this.

From that point to where we are right now, it took the help of a lot of people; and here again, a lot of the technicians that we used in doing this were the people who built the machines and put them together. We went through many trials, kept records of what went on as the process was being developed. In the glass industry, scrap is a word that could almost put you to bed because it can build up on you and you can have glass all over the floor from a machine that is not operating properly. It is very fragile and if dropped on the floor is broken and you cannot use the glass over again. All of these things we have done--that have been accomplished--with someone offering an idea to begin with and all of the technicians throughout the organization helping to put it together and finally making a process that works, controls, and keeps your business in a profitable state where it should be.

Something that I forgot to mention--we do have a computer. We have a 360-30 that does quite a bit of work for us. We are using it more and more in the planning and control of our business. It has reached the point now where we are concerned about the security of it; and we are probably going to take special pains to secure the equipment and records. Here again, we have programmers; we have systems people; we have what we call computer operators. This is a lot more than just pushing buttons--these people understand the systems and equipment and know what they will do. They do some of the programming--report all of the information possible very quickly and very accurately. This is another area in which some of the people that you will be working with might be interested. This gives you a little bit of a background of what our operation is like, and I think we are very

typical of industry not only in this but in many other areas around the country.

We look for people, of course, like I say we can build on, people that have enough background that we can train such as is provided here at Nashville Technical Institute or the Area Vocational School here--craftsmen, the people building the machine, the people that do a lot of the drawing. Both of these institutions, of course, can train people for us. They have to get the right kind of people in the schools so they can be trained. You can do a lot in your counseling work to sort out the kinds who need help in determining in what direction they are going. Everyone cannot go to college. I do not know what the statistics are, but I think Mr. Phipps mentioned something like 20% receive an undergraduate degree. The percentage is not very large, but it is growing, I guess. For many others, of course, who are looking for something to do in a way to get satisfaction out of what they are doing, whether it is with their hands or the engineering designer who has to have imagination, whether the computer science technician, or whatever it may be, there are many opportunities; and I think they are going to continue to grow. We have found, for example, when we first came to Nashville we had something like 29 skilled people in the factor group; today we have some 200 or more doing the same kind of work skilled with their hands or some kind of creative type job. Ten times as many as we had! We find these people are hard to locate. We are keeping our eye all the time on the people that are coming out of the schools here. We feel that this is going to be one of our best sources of material for the kind of people that we need. We know that as we automate more and more in our business that we are going to need more technicians and more craftsmen and more people with skills. They just do not come off the streets and walk into our employment offices and ask for a job. We have to go out and find them. You, I think, are in a great position to advise youngsters, both boys and girls, that there are many, many jobs some of which you will see Thursday. They can be very satisfying, paid well, a lot of status, and respected--this isn't something you get only with a college degree. They are very acceptable in our business, and we are pleased to find someone that can come in and do a technician's job for us. It is a fine opportunity, and we will be using them more. I think you can do a lot to help the school--you can do a lot to help us by directing the new people toward these interests. We would like to offer our services in any way we can to help you in your work. I think one of the best ways I know of that makes it possible, of course, is for us to keep in touch. Tours of our plant--we are always glad to have teachers come in and look at our plant. We feel that they are the ones that are going to help the youngsters. We are always glad to see you and all we need is a few days' notice to get prepared, to let our people know that visitors will be there, and take you around and show what kind of jobs are available. We would be very happy to have our people sit down and tell you what the requirements are and the preparation necessary.

I appreciate the opportunity to meet with you here this morning. I think this is a great week you are having, and I wish you a lot of luck. If there is any questions, I would certainly be glad to answer them.

INTRODUCTION OF HAROLD J. BLACK

Edward L. Weld, Director
Nashville State Technical Institute
Nashville, Tennessee

Harold J. Black is currently Vice President for Engineering and Development at AVCO Aerostructures Division, the largest industrial employer in the Nashville area. He has directed the project engineering activities of that organization since moving to Nashville in 1967 from his native state of California. Harold has a B.S. degree in Aeronautical Engineering and is a Registered Professional Engineer in California and in Tennessee.

His thirty-five years of professional experience has been predominantly in the aircraft industry, but also includes two years on the faculty of a college-level technical institute at the outset of World War II. His continuing interest in the field of vocational-technical education is indicated by his current service on engineering advisory committees for University of Tennessee Space Institute, Tennessee Technological University, Vanderbilt, and the Nashville State Technical Institute. He was recently appointed to represent industrial management on the Tennessee State Advisory Council for Vocational and Technical Education.

AVCO AEROSTRUCTURES DIVISION

Harold J. Black
Vice President of Engineering and Development
Nashville, Tennessee

Good morning ladies and gentlemen. We are all familiar with the Biblical admonition that a "little knowledge is a dangerous thing," to which I would like to add my own postscript. "A lot of knowledge in the wrong direction is even more so." As my first point this morning, I will try to establish a need for re-evaluating our educational priorities. For at least two generations Americans have figuratively turned their backs on the 'world of work', while pursuing for themselves (and particularly for their children) the higher planes of academia where we hoped to realize a true utopia of personal satisfaction and life fulfillment. Only very recently are we beginning to suspect that a higher academic education does not automatically guarantee a happy and successful life; and that it may not be the very best goal for every individual. In reviewing our educational priorities -- just as we are reviewing many other priorities in the nation today -- I would like to touch for a moment on what I believe to be the relative importance of vocational and/or technical education to our total educational system. Perhaps we have gotten our definitions a little out of order. There has been a widely held and popular misconception that 'mass education' means the same thing as 'education for the masses.' Of course, that is not true. In proving that misconception, I think that some have tended to push higher academic education without sufficient regard for any real purpose of that education for the individual student, and often without any relevance for the real world in which he must live.

Let me offer just one, small, generalized statistic in support of that statement. Most of my friends in state universities tell me that the present dropout rate is about one-third during the first academic year at the university! Is it possible that one out of three of our college Freshmen students should never have enrolled in the first place?

Another popular misconception is that vocational and/or technical education below the B.S. degree level is a kind of "second best" education for "second best" students. As long ago as my own high school days, the vocational curriculum was a "dumping ground" for the academically disadvantaged -- a program where the failing student could fill out his time of mandatory schooling. Guidance counseling has historically devoted more time and attention to the 'college career' student than to the 'career in the world of work' student. Rather recently there have been some encouraging signs that we are all finally adjusting our relative values, as between the formally academic and the more work-related vocational/technical education programs. Today there are twenty-three Area Vocational schools and three Technical Institutes operating in Tennessee. Yet, when I moved here just fifteen years ago, such institutions of special education were unheard of in this state and in much of the south.

Such substantial progress in that short time is more encouraging, and should be a source of justifiable pride to Tennesseans. Another real sign of progress is this week-long seminar on guidance counseling as it particularly relates to careers in the world of work.

For the sake of this discussion, let us then accept the promise that vocational (or technical) programs have a real and meaningful place in the education spectrum; and that, for many students, they represent worthwhile objectives to be sought by deliberate choice, and not merely by default.

Let us next consider whether business and industry have an active part to play in the education process. It has long been my personal conviction that the business and industrial community have a very real stake -- and also a very real responsibility -- in the education process of its future employees. After all, most students will spend more years of their lives in business or industry than they will in their pre-employment formal education period. Furthermore, any industrial or business firm today that does not actively seek to have well-trained, happy, satisfied, and progressively motivated employees is simply not living in the twentieth century -- and probably will not last long enough to experience the twenty-first! Consequently, I submit that a close relationship and an active interchange between the working world and the educational world is much more likely to increase than it is to diminish. Indeed, it is not difficult to imagine a time when business and industry may directly support student-employees to a much greater degree than the simple tuition reimbursement programs that have become fairly common today.

My earlier remarks have been somewhat critical of educators who at times have not assigned sufficient importance to the more work-related curricula as compared to those of a more classic form. In fairness, I must also accept criticism of the industrial segment for some of its recent attempts to directly engage in education. All too often such attempts have been too narrow in subject matter and too limited in achievement potential for the trainee.

There have been a number of widely-publicized programs of specially constructed vocational and technical training which industry has undertaken -- frequently supported by public funds -- in well-intentioned attempts to meet its semi-skilled and skilled employment needs, while at the same time providing economic improvement for the under-employed. Thus, we have seen Job Corps training, "sidewalk techs", JOBS projects, and many others come and go. Many have been locally successful, but none have produced a universal formula for success. I suspect this is because the successes have been attributable more to the personal abilities of the key people involved, rather than being due to the fundamental methodology employed.

To illustrate my point that job training programs are not always the best form of vocational education, let me cite an example that occurred here in Nashville and concerned my own company. Two years ago, we were just entering the production cycle of a major aircraft

manufacturing program that would be active for several years to come. This project demanded an increase in our skilled production complement that could not be met by the locally existing trained labor force. To supply our projected needs, we embarked on the first major JOBS training program that was conducted in Middle Tennessee -- an activity that was carried on until the early months of this year. Supported by federal funding, we initiated a project to satisfy two needs: (1) training of several hundred economically disadvantaged citizens to qualify them for skilled, but specialized, employment; and (2) development of a skilled labor capability equal to our projected manufacturing needs. As a matter of detail information this was a "hire while learning" program wherein each trainee was an employee on the company payroll from beginning to end of a thirty-nine week training period. The first ten weeks were in the classroom, followed by two weeks "hands on" training with standard hand tools, then followed by twenty-seven weeks of on-the-job employment training through a progression of specialized job classifications.

All went well, until a series of near catastrophic and completely unforeseen reverses beset the major program for which the employment need had been forecast. Due to a chain of events completely outside our company's control or cognizance, the build up in production activity was drastically reduced. The relatively sudden and inevitable result was the layoff of a substantial majority of those we had worked so hard to train. Though we have no possible way to follow the subsequent fortunes of every terminated employee, one cannot help but wonder how many -- who had seen real hope for economic independence for the first time -- now feel more disheartened and more frustrated than ever before.

My purpose in relating this local experience is certainly not to belittle honest and sincere attempts by either industry or any other group to help our citizens achieve a better employment status. But I do think the story serves to emphasize two points. First, if there had been a broadly based and well supported vocational training program in this community for the past generation; then our necessarily limited program would have been unnecessary, and the aftermath events would have had a less dramatic and less traumatic effect on those it sought most to help. The second point is more important. Had their training resulted from a broader vocational program, those who were suddenly displaced would obviously be better equipped to compete for other skilled jobs in the area.

From experiences to date, it seems clear that business and industry should not attempt direct involvement in the (vocational-technical) education process. However, as the ultimate users of the end product they do have a proper and useful advisory role in such education. To be even nominally effective, their role must be one of a cooperative partnership with those who are more directly concerned with teaching. Honesty compels me to say that such cooperation does not always exist, and industry's advice is not always welcome. Sometimes it has seemed to me that educators seek not the recommendations of the world of work, but want only concurrence with what they have already decided to do.

There are a couple of general suggestions which I would make to you counselors and which would assist us toward our common objective of more effective vocational-technical education. One is that it is very important for us to recognize that vocational students, who often are in an academically disadvantaged position, have a need for more counselling assistance (not less) than does the college-bound student. Perhaps brought on by circumstances of background or environment, or by attitudes of parents or friends, many vocational students feel a sense of failure by just being in that category. We must make very sure that such feeling, where it exists, is carefully but firmly dispelled.

Another suggestion concerns the important matter of student motivation. Those best able to relate to and motivate today's young people are those who can convince them they are "telling it like it is." And to convince them you are telling it like it is, you really have to know how it is -- first hand. I'm pleased to see that your program schedule calls for two plant tours this week. That's excellent, and I hope you'll visit others on your own. You might be surprised to see how flattered and pleased our business and industrial firms are when teachers -- especially career counselors -- ask to visit and learn about their activities.

I have been asked to identify those specific vocations which will offer the most career opportunities in our area. Without attempting an all-inclusive list, I will mention a few.

1. Machinists. We have now, and will continue to have a shortage of qualified machinists.
2. Air Conditioning. As its usage increases, there is an increasing demand for and inadequate supply of installation, maintenance, and repair technicians who really understand air conditioning principles and systems.
3. General Maintenance Mechanics. There is a broad and growing need for these people -- as a sort of twentieth century "Mr. Fix-It." Demand will increase as the service oriented businesses expand.
4. Computer Technologists. In this area, we may well have reached a temporary market saturation for those in computerized business data processing. However, in dual technology fields -- such as numerical controlled machine tools -- the demand will continue.
5. Environmental Quality Technicians. Rapidly proliferating anti-pollution laws and newly defined environmental quality standards will create many public and private opportunities for trained instrumentation technicians in this field.

There is one further argument for good vocational and technical education that is unrelated to any immediate working career benefits for the individual. Today we hear much outcry about the mess that technology has gotten us into. Of course you and I understand that technology as such hasn't gotten us into anything. Our problems of unbalanced ecology stem directly from the uninformed and poorly

evaluated decisions which we as a people have made -- wittingly or unwittingly -- regarding the applications of technology. I submit to you that improved vocational and technical education will result in a more technically knowledgeable population; and hopefully one that may make better decisions on the uses of technology than have their predecessors.

In conclusion, let me return to my opening comments about our sense of relative values in education. After more than two hundred years, it can still be truthfully said that "life, liberty, and the pursuit of happiness..." are among the simplest and noblest statements describing the goals of man's life. What we have learned in the interim is that it is not always or necessarily true that wealth, power, or advanced degrees are synonymous with those goals.

You have been a most attentive and courteous audience. Realizing nonetheless that you may think me presumptuous in telling you about education, I offer a fair exchange. If any of you care to visit me in our plant, I promise you equal time, equal attention, and equal courtesy -- while you tell me how to design and build airplanes.

Thank you.

E.R.I.C. MATERIALS - V.I.E.W. PROGRAM

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After listening to that introduction, I think we should have it rewritten because people will get the impression that I really do not know what I want to do and that may be true. But, it could also be the fact that nobody wanted to hire me for too long of a period of time, and I prefer (and this introduction is one of my problems), not to be called Doctor because I do not think I am old enough to be called Doctor. But you listen to that introduction, and I must be pretty old. Really, it is not that extensive. I thought Mr. Phipps was going to say that I finally saw the light and came to Tennessee. I am not sure how bright that light is at this point.

We are in the middle of budget hearings with both the State and the University; and if you have anything to do with budgets, you can understand the predicament we get in. Both have different objectives, and we have to try to work between the two of them. I want to take just a few minutes to give you an indication or some idea of the overall purposes or objectives of research in vocational education. To start with--some of our specific objectives--how we are trying to meet the needs of primarily teachers, administrators, and local personnel in this State. I will turn the second part of the program over to our Information Coordinator, Mrs. Wilder, who really gets down to the grassroots and works more with individual teachers and others than I have an opportunity to at this point. I am not sure if you are going to be able to hear me, but I do need an electronic blackboard over here. To hold to my schedule so I do not hold you over your lunchtime, I am going to read partially what I have to say and hope that you can grasp some of this material. If you have any questions at any time, please do interrupt me and we will see if we can answer them. If we cannot, we will tell you that the next expert will take care of that part of the program.

Educators do not look at research and development the same way business and industry do. Business and industry has usually up to 10 percent of their budget set aside for research and development purposes. This is how they come up with new products and so forth. Education never has thought in those terms until recent years. In vocational education, we really have some research money. The 1968 Amendments to the Vocational Institution Act of 1963, called Public Law 90-576 Part 3, really authorizes money for research in vocational-technical education. It authorizes not appropriates--there is a considerable difference there. The money is set aside primarily for research in training purposes, experimental development, and pilot programs, and for the dissemination of information. Research in training includes training of teachers, lay personnel, and any of our prime help groups that we need to get at. The area of research

literacy primarily--to be better consumers of research. We have $100,000 worth of research--most of it still laying on the library shelf. Our purpose is to get that research off the shelf and into the classroom or get teachers and others to apply the results of research, results of experimental research studies, very highly-controlled types of research development where we have an idea, and we want to come up with a curriculum guide or handbook or a new type of program and pilot programs to put it out in the field to show people how it can actually work, and on the firing line ultimately.

Our third area where we use research and development funds is in the area of dissemination of this information. Get it before the teachers and others--I am aiming at teachers but I mean guidance, supervisors, administrators, teacher educators, and others--these are the clientele that we deal with primarily. We need to get this information to them in any form that we think they will use best. We are not sure we are successful, but we are trying. I think the traditional type of research has usually been quite experimentally controlled. We think of it in these terms, I think, and in fact it has been mostly graduate-centered. Most of your research is done by graduate students in dissertations and master's thesis. How many teacher educators in general education, number one, and vocational education, number two, (here you can draw a dichotomy between the two and I would like to but we cannot) and professors sitting in the seat of learning are really involved with research that is action-oriented or even basic research? I think you could count them on not too many hands really. Up until this point in time, research has been primarily graduate centered. You had to do it to get a degree, master's or doctorate. The professor did not have the time to do it or he was not interested, one or the other. To get it done, graduate students have been forced (no, they have not been forced, just kind of coerced--if you want a degree you do it.) Well, needless to say this has people concerned and, well, really puzzled if nothing else.

We have been trying to get research efforts into a programmatic plan or program. Really this is a programmatic research effort to systematically solve problems that exist out in the field among teachers and people like you in the guidance profession. It should be mission-oriented with a specific problem in mind that we are going to solve. We cannot afford, particularly in our field of vocational education or in education itself, to be doing research for the sake of doing research. It is too expensive. We cannot see results when we reach the psychological problem of people not seeing the benefit of doing anything that you cannot see an immediate payoff. There is a need for basic research and experimenting and doing research for the sake of research to explore the alternatives to any particular thing that you may be interested in. But our research and programmatic effort now is hopefully missionary in its design so that we can take it and disseminate it when we get through with it and make some use of it. Our overall goal is the improvement of the student who gets out of that school. We hope to improve the program, and the teacher will resultedly improve that school or some aspect of that school.

A lot of people have worked in this area of research and development models. Just to give you an idea of some of the areas that we are concerned with, we have Dr. Moss of the University of Minnesota. He happened to draw a lot of people's ideas together and put them on paper and type his name to it, so this is really a national effort. It is not his own ideas, but there are some of his own ideas. I am almost feeling like that phony agent in Green Acres. I catch myself talking like Mr. Kimble does. Nothing is really that absolute is what I am trying to say. Yet, we do have a responsibility when we see a definite need for some basic research. This is part of the overall total curriculum. Curriculum materials are another area where we ought to be doing some research. Program evaluation--what is happening to the product after they get out of our classes or one course even? What happens when he gets out of school? We need to stimulate research efforts. We do this in a number of ways which I will explain in just a couple of minutes. We need to identify--I am not sure inventing is the right word--to identify and put together some prototype models. Hopefully, not on the L-1011 so it becomes extinct because one little aspect fell through such as Rolls-Royce. Rolls is not a little aspect. One part of the total plane fell--did it fall apart? One main part, and this had a massive chain reaction effect. We do need a prototype that includes the total system of education, school training, and we need to take a look at some new knowledge. We, in vocational education particularly, and I am within trying to fight within and this is where I do consider myself a rebel, not necessarily because I am in Tennessee, but I knock heads with some of the people in Tennessee--we ought to be looking at performance contracting and the voucher system in vocational education. Let us not say that we have all of the answers for any students coming into the classroom. We need to take a look at some of the other areas.

Applied research: this is primarily where our efforts are aimed, administering research monies: and finally, I made the point back earlier that monies were authorized. Sure they authorized us something like $30,000 nationwide in 1968. We never got a cent (well, we got a few) up until this current year. Finally somebody said, "Hey, Mr. President, the law says 10 percent of the funds allocated to vocational education must go for research. You have to use them for research." Previously, they have been taking them and using them wherever they wanted, but somebody held them to the law this year. As a result, Tennessee--I don't think I am out of school talking about the amounts of money that we are dealing with and they sound quite massive, and I thought so when I came to Tennessee, but there really aren't that many--we have been getting Federal funds to the grand total of $18,000 a year. Now what can you do, what type of research and development efforts can you carry out on $18,000? Fortunately, this state did add some money to that pot so we had the previous year's making a total of $100,000. Nevertheless, the total Federal allowance was only $18,000. For two years we never got the appropriation until March. Eighteen thousand dollars may be hard to spend for Knoxville, UT, but you could spend that on a very small research project. Ten percent of that money has to go for research. Five percent of it you can still keep to administer as you want, but you must use it for research and vocational education.

The other 5 percent goes directly to the State to use as they want to solve some of their problems. Mission oriented, that I talked about back here. The states know what their problems are, let them have the money and solve their problems. We got $430,000 this year. The question is what are we using that money for? We are using it to study what we spent the $18,000 for. All of a sudden, nobody knew it was coming, we had no idea the additional funds were coming. All of a sudden they were there, and we had to use them. We have systematically developed a plan, we think, to utilize those funds to get the maximum payoff. Conducting training activities, and we are seeing some of the things here that we are using research funds for --primarily vocational education, disseminating results, and we have more to say but we won't. Some of the duties and responsibilities revert to you. By the way, the State can use the money any way they want to for research. Most states got started in the RCU business because the Federal government did provide some seed money starting in 1965, and this is where our first RCU got started in this state. They were directed and had to meet the objectives from Washington, not from the State. This is why some people feel that the first RCU in this state wasn't meeting the needs of the State. They were getting 100 percent funding from Washington and they had to answer to Washington, not to the State. That is why there was a change in 1968 to make some of the funds come to the State. Now the State can use the money the way they wish.

RCU's in some states are passed directly to the State Division of Vocational Education and some of them are attached directly to universities, some of them are attached to community colleges; and some go to completely private agencies. This is just an administrative matter. The reason it is attached to the university in this state is the fact that they felt the university could pay higher salaries; and Mr. Phipps said that I do get paid by two places and that is right. I may get two paychecks but totally they are not as big as one should be. Salaries are not that much greater. We have our problems too. We can pay other people easier than we can pay ourselves. At this point in time, our staff consists of about five full-time professional people, a number of graduate students that varies during the year, some clerical and supporting staff, what we call the librarian and a fairly decent information system. I have to say that, my Information Coordinator is here. We will be expanding because next year we are expecting the same amount of research funds that we had this year, and we think we can use them very effectively.

We do provide consultant services to individuals and groups of people in the State who are interested in research projects or development projects--underline development--we are mostly interested in development. We will help them write proposals. We resist the fact of writing the proposal itself, but we will help people write the proposal. We will give them considerable amount of information, and we will essentially do a review of the literature for the person. Then we either find the money to fund the project or fund it ourselves, and we do have the capability of funding research ourselves. We review the proposals as they come in, and we do get some unsolicited ones.

We hope that we get more unsolicited, but people are afraid of research. They are thinking back in terms of the traditional type again--very discipline-oriented, experimentally controlled, and graduate centered--they still think in those terms. So, we are having a hard time in it. We have not been completely successful yet in getting people to submit proposals on their own. We do conduct some research study, but we are a Research Coordinating Unit and not a research unit, so we hit this one very, very lightly if we can.

Dissemination of information: We use any type of method we can to get this message to the people. We think that in order to make sure--I talked about the research that is on the library shelf--to get it out to the people, we need a practical information system. We do have a fairly good system, I think; and we need to emphasize two-way communication. Most of you probably are not familiar with our RCU circulator. But we do have a monthly (during the school year) awareness paper where we try to get the idea to the teacher and provide some methods through there to get feedback from the teachers. The only way we can improve our program and help solve problems, problems as they exist, is if we get feedback from the field. We need to be linked to E.R.I.C. Any information system needs to be linked to E.R.I.C. so that they have access to all of the information and research efforts as they have been completed to prevent overlapping of efforts. We need to think in terms of stages of adoption in order to make people aware of what is going on. I mean to get them to ultimately make a change in the classroom where there is an instructional technique, a curriculum, an administrative change (if it is at the administrative level), whatever the change may be. First of all, I need to become aware of what these new ideas and their changes or innovations are, and then we need to get them interested somehow so they will say, "Maybe that is a good idea." Then they need to take a look at it, evaluate it, and determine themselves whether or not it is a good idea, and then we need to get them to try it out. I hope you can see how our program does work towards those goals.

In making people aware, we have to provide a variety of outputs for all of our audiences. As I have said, our audiences are teachers, supervisors, administrators, teacher educators, State Advisory Council personnel, legislative people--you know they still hold the purse strings so we have to be concerned in that area--and the general lay public we need to get at in some ways. We have tried a variety of methods to get to people. Our information then would be quite easily accessible, and I think Mrs. Wilder will tell you how we make some of our information accessible. We still need this one-to-one interpersonal communication. The best way to accomplish change is by getting right down and working with the individual with his or her problem right in their particular physical location. As we proceed through our program, I want to back up to proposals just a little bit, both the solicited and unsolicited proposals. We request a prospectus, a two or three page write-up of your idea. What it is that you want to do, how you want to do it, and how much it is going to cost. Then we take a look

at it within the RCU. If it is a good idea, let's go a little bit further and we will encourage a complete proposal; or if it is no good, you know all ideas are simply not good. Unfortunately, some of our people don't have access to information. Some problems are already solved when we have someone interested in it, but they still want to research the same problem. This is why we encourage a prospectus first, to take a look at it. If we have the answer, we will give you what information we have on it. You won't have to spend your time in trying to answer the question.

Our priorities in research and development we have--and they are determined primarily by a statewide conference of guidance personnel, general educators, school superintendents and principals, technical institute people, community college people, teacher educators, teachers, and others--had some conferences which bring people together who really chew the fat. That is not quite true. Chewing the fat is not accomplishing anything is it? We really get in the nuts and bolts of the problems. What are some of the very specific problems they have that we ought to be spending some time on? After these problems are identified--and I will briefly go over the major problems that we are talking about in this state as a result of our conference in February--we also have an advisory council made up of business and industry personnel from technical institutes, community colleges, universities, and teachers to give us guidance throughout the year. We have been meeting every other month. Unfortunately, the last couple of months have been pretty busy and we have not been able to meet lately. But, we do try to use an advisory committee full-time during the year to keep us on the right track and to keep us in touch with the real world.

Our priority areas are:

1. A management information system for vocational education in this state.
2. A curriculum development--revising or up dating curriculum.
3. Pupil personnel services.
4. In-service teacher training.
5. Alternative delivery system, and this is where we talked about performance contracting and development systems.

These are the five major areas. A lot of things can fit under any one of those areas. So, we haven't narrowed it down very much yet. We are grouping them into the five categories, and we are putting our first emphasis on the management information system.

Just a little bit of review here. We are trying to prevent some unnecessary duplication of both research efforts and dissemination efforts. We are trying to develop a system for innovation. Very specifically now, our objectives of the RCU are:

1. We think our first effort in this whole area--getting at our five priorities and we are going to mix these together if you can picture it that way--is information retrieval and dissemination. We think this is the first thing we have to get moving very rapidly.

2. We need to stimulate and encourage occupational research. We do this by providing graduate assistantships. We have had up to as many as eleven graduate students at one time or another this year. We do pay the most of any graduate assistantship in the College of Education. This causes some problem because of the competition among the students.

We provide some training sessions out of the State to get to the people. Our mini-grant program is under the area of stimulation where actually any teacher, supervisor, administrator, graduate student, anybody can submit to us a little proposal, $500-$600-$800, to carry on a little research project on their own in their own school. We hope they can become a little more interested in research and see how easy it really is. We have to be sophisticated at the University and say it is hard and highly academic in nature and it really isn't. We are trying to solve problems. We have mini-grants going, for example, to do a community survey to identify specific occupational training needs, to identify specific work opportunities or job training opportunities in local areas, to do evaluations of your local programs, to conduct a follow-up survey of graduates of the programs, and to use a multimedia approach in teaching the adjustment of automatic transmission. These are some of the things--research projects and mini-grants--that we have funded to identify the desired characteristics of a beginning business and office teacher. Okay, we try to coordinate research activities. Memphis State is doing some work, MTSU is doing a little bit, Cookeville would like to get interested, and UT has several different groups of people doing them. Then we have to coordinate activities with the regional United States, Southeast, and nationally. We do find that some of the things we are trying to solve are the very same things that the people over in Mississippi, North Carolina, and other places are trying to solve.

Now, I will just take a couple or three more minutes in the area of Pupil Personnel Services. We are anticipating this next year a project of approximately the $60-$80,000 range, which is what it is going to cost us. How many of you have heard of the V.I.E.W. system? The V.I.E.W. system is another type of microfiche where occupational information is placed. Take a photograph and reduce it and put it on this film. We will be using a 24-1 reduction which can be used under the power of a regular microfiche reader and reader printer. On the card you can have access to it by punching out certain numbers. The information presented on the filmstrip, if you want to call it that, are on the microfiche. What are the training opportunities, and we hope to localize it to county level, not on a statewide level. We find some people doing it on a state basis and really a machinist would not get the same at AVCO as he would up at Kingsport or Memphis or Chattanooga. So we need to localize it quite a bit more. So, what are the training opportunities; what are the educational requirements

for every student going to get this type of training. What might we expect in terms of salaries, wages, and fringe benefits? What are the physical limitations of the job? That type of information we hope to identify for up to 300 different job titles this coming year and get out on this little aperture card (and we will have our own for Tennessee) and disseminate it to all guidance personnel in the state. You will get those that are appropriate to your geographic region. You will also have access to those on a statewide basis if you want it. We hope to--and Mr. Phipps was very instrumental in conditioning some people to thinking they needed this in the State, and we appreciate his efforts--hope we can see some of your recruits tomorrow. So, this is one of our other big projects that we are working with and we hope to enlist the support and help of a large number of guidance people get this information for us out in Jackson or even here in Nashville. Obviously, we cannot get a large enough central staff to go around the state and dig up all of this information on every job. So, we hope to contract with individual guidance personnel to provide this information to us and then we will put it in consistent form and reproduce the aperture card and send them back to the school. They are quite easily stored. We can get eight pages on this one little aperture card, and you can retrieve it very rapidly. There is other supporting information that you can get if you need it.

Video tapes will be the next step. Provide video tapes and slide sets on the occupations under consideration--on each occupation. So, a student can really see what is going on in business and industry. Now that is a couple of years off, the video tapes and slide sets. We have to get this operating first.

I think I have taken a little more time than I had anticipated. Mrs. Wilder will provide some more details about our information system, how you can use it, its capabilities, and the microfiche. I will send you hard copies of materials. I do have to leave you and get back to a budget hearing with the trustees this afternoon so I will be leaving shortly. Do you have any questions?

Mrs. Wilder will talk more specifically about how we are trying to get these microfiche materials and how our network is being developed. We are still in the growing process and the evaluation of it also. Mrs. Wilder is our Information Coordinator. Every project we do features the information system so she can then get it out into the state.

E.R.I.C. MATERIALS - V.I.E.W. PROGRAM

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Information Specialist
University of Tennessee

I want to start out today by telling you a little bit more about ERIC, or Educational Resources Information Center. It is a national information system for education and consists of 20 clearinghouses which are located all throughout the United States. There are four major components of the ERIC system (Transparency No. 1). The first is Central ERIC, the sponsoring agency at the U. S. Office of Education. It operates, as of now, out of the National Center for Educational Communication, or NCEC. The second component is the ERIC Facility. This is where all the computerized materials come from and, as Dr. Bice mentioned, this sponsorship changes frequently. National Cash Register (NCR) used to have the contract to supply computerized materials and now it is in the hands of another firm called LEASCO. So, we at the RCU receive our ERIC files on magnetic tape from LEASCO, but overall the source is referred to as the ERIC Facility. The third component is ERIC's twenty clearinghouses, and I will explain to you in just a little bit how they feed the information into Central ERIC. Finally, the ERIC Document Reproduction Service, better known as EDRS, supplies us with our microfiche.

Now, what kinds of materials are in the ERIC files? Most of the materials are research or research and development projects. Many of them are U. S. Office of Education sponsored projects and can't really be called research, but they <u>are</u> developmental projects. Each document is submitted to an appropriate clearinghouse. For example, if it is information in the area of vocational-technical education, it is sent to the Vocational-Technical Clearinghouse at Ohio State University. If it is in science education, it goes to the Science Education Clearinghouse. If it is in the area of educational testing and measurements, it goes to Princeton, New Jersey, to the Educational Testing and Measurements Clearinghouse. It remains in the clearinghouse for about three months' time, and during this time it is screened, abstracted, and indexed. Indexed terms are assigned and new terms will then be placed into the ERIC Thesaurus. I will discuss the Thesaurus and the use of it a little bit later. Each ERIC document has a variety of different index terms known as descriptors, which appear in the resume of the document along with the abstract. The abstracted document goes on to the <u>Research In Education</u> contractor where it is edited and a camera copy of the particular index is prepared. <u>Research In Education</u>, better known as RIE, is ERIC's major publication. There is a copy of it over on the far table and I invite all of you to take a look at it a little bit later. I know some of you are already familiar with it. RIE, then, is sold by the government printing office.

An advantage that Dr. Bice mentioned briefly a minute ago is that we can disseminate our microfiche materials at a rate of about ten cents per microfiche. One sheet of microfiche contains up to seventy pages and only costs us approximately ten cents to reproduce. As you can see, State RCU's normally would have a standing order of microfiche. We receive the entire collection and we get each successive order as each new one comes into being. By doing this we can receive the microfiche at a much less expensive rate. Otherwise we would be paying approximately twenty-five cents per microfiche and with our standing order we pay approximately eleven cents for each microfiche document. So, microfiche can be disseminated and obtained much cheaper when you have a standing order and, of course, libraries are usually the people who commit themselves to a standing order of the ERIC files. As I mentioned before, the RIE Index is sold by the government printing office and the ERIC Document Reproduction Service sells the microfiche and hard copy of documents. Now this indicates, of course, that you can obtain both microfiche and hard copy of any document or almost any document which is listed in the ERIC file. Almost always the hard copy will be much more expensive than microfiche. This is why the RCU is able to conduct such a large state-wide dissemination system - because it is relatively inexpensive. Once we have the microfiche, it only costs us between nine and ten cents to reproduce one.

In reading a microfiche document, if you have access to a reader-printer you can print out individual pages if you like. In other words, if I had a piece of microfiche with seventy pages on it, I would print out the whole thing at the rate of ten cents per page. That is considerably more expensive than just having access to a machine and using the microfiche copy of a document. The item on the far table is just a reader and it sells for around eighty-nine dollars. Dianne Groves and Janet Turner, who spoke to you earlier today, have a reader-printer in their library here.

At the RCU then, we subscribe to all of the ERIC collection which is not just the RIE Index. ERIC has several information products (Transparency No. 2). The primary one, as I mentioned, is RIE. A relatively new one is called CIJE, or Current Index to Journals in Education. This publication has been in existence since April, 1969, and at that time articles from approximately 250 journals in the field of education were abstracted. In 1970, and from that time on, CIJE has been indexing from over 500 different journals just in the fields of education and psychology alone. So they have pretty much covered everything, including foreign journals. CIJE can save you the trouble of going to the Education Index, Psychological Abstracts, and Sociological Abstracts. The normal procedure, if you are doing research at a particular university, would be to consult all three of those I mentioned, but that really wouldn't be necessary as CIJE is an index to the articles contained in each of those and more.

Where RIE has a lengthy abstract for almost every one of its documents, CIJE will have, most of the time, a one or two-sentence annotation; just a brief description of the article. Keep in mind that these are all journal articles and the material from RIE is

research and development documents. These are the two major publications and we have both these indexes in our library at the RCU in Knoxville. Also, if I'm not mistaken, Mrs. Groves and Miss Turner are planning to have both of these publications on file here at Nashville State Technical Institute library for you to use. Now, in addition to these two, there are some special collections in the ERIC files. The documents indexed in these are also on microfiche. PACE, Projects to Advance Creativity in Education, are all projects which were funded by the U. S. Office of Education. Some of the projects are still on-going but the funding is no longer in process. The Manpower Index contains strictly those documents relating to manpower. These were funded by the Department of Health, Education, and Welfare; Labor; Housing; and Urban Development; Agriculture; Defense; and Office of Economic Opportunity. There is a variety of documents in this index. I don't believe these two special collections will be on file here in Nashville, but at any time you are welcome to request a loan copy of the index and, if you happen to be in Knoxville using the library, of course, you can obtain the microfiche of the documents listed in these indexes at that time.

The clearinghouse that we at the RCU work most closely with is the Clearinghouse for Vocational and Technical Education, better known as V-T ERIC, at Ohio State University. This clearinghouse supplies us with a considerable amount of additional materials in both hard copy and on microfiche. As I see our library it is a kind of a "mini" library, because it is small and we are able to house a large number of documents in a much smaller amount of space than you would if you had hard copies of all the same documents. Our library consists mainly of the ERIC files, V-T ERIC files, and Tennessee Research and Development projects, the documents from the State Department of Education and the Division of Vocational-Technical Education. The first three of these are probably the most utilized of our library materials. As I mentioned, V-T ERIC supplies us with instructional materials, research reports, curriculum studies, conference proceedings, and information and analysis papers. We have found teachers to be very much interested in the curriculum studies and instructional materials that we have. We are very proud of this fact and we try to tell people as we get instructional materials from V-T ERIC which ones of those we think they might be able to use. This is the kind of information that comes out in our monthly CIRCULATOR. If any of you are not already on the mailing list for the CIRCULATOR, you may request that your name be added. The CIRCULATOR is usually just two pages long and doesn't take long to read. I'll take your request today, if you would like, or simply write us at the University of Tennessee in Knoxville and we will be happy to add your name. There are some publications which come out of the V-T Clearinghouse in addition to the ERIC materials listed in RIE. They are almost all instructional materials and are listed in Abstracts of Instructional Materials in Vocational-Technical Education, better known as AIM. As we set up the information system this year, we established thirteen Regional Resource Centers throughout the state and Nashville is cooperating as one of these. Each Regional Resource Center, including Nashville, has a mini collection of the microfiche

which you, of course, would have access to. Many of the materials requested by the RRC's from the RCU are from this particular index. (Transparency No. 3) There is a copy of AIM over on the table for you to look at. It's brother publication is ARM, Abstracts of Research and Related Materials in Vocational-Technical Education. There is some overlap with the documents listed in the RIE and ARM indexes as they both contain research materials. With the large amounts of federal funds allocated for research on the disadvantaged in the last few years, this clearinghouse, in relation to the other nineteen, has had probably ten times as much material to index. So they have had to do something with it, and, rather than not include it in the ERIC files at all, they have published it in the form of an annotated bibliography. Hence you have these two additional publications which are listed as such in the RIE index. Is that clear? Do you see how this clearinghouse operates so that if an individual so desired he could subscribe to these two indexes and get only the groups of microfiche listed in AIM and ARM rather than getting the whole ERIC collection? The Regional Resource Centers will probably discover that these vocational-technical documents are really the most valuable to them. There are some very valuable general educational documents located in all the ERIC indexes. Right now we are just loaning our extra RIE indexes to each of the regional centers and asking them to request some general ERIC materials as well as some vocational-technical materials if they so desire.

To give you an idea of what happens when a request reaches the RCU office, let's look at this flow chart (Transparency No. 4). First of all, the request is reviewed. It may come in by mail or by phone or an individual may just come walking into the office and ask for some specific information. We at the RCU review the request and determine how urgent the need is. Then it is referred in one of two ways. It either goes to a graduate assistant who writes it up as a computer search or directly to the library where it awaits a manual search of the files. I mentioned earlier that the ERIC Facility supplies us with computer tapes, magnetic tapes of all the files. In other words, everything that is in these indexes is also on magnetic tape and, rather than going through these files by hand, you can have the computer do the searching for you. We charge fifteen dollars for the search and, in most cases, we can get the search back in two to three days. With each search, we will have searched the files completely from 1966 to the present time, and will have almost all of the documents identified by the search on microfiche. We now have microfiche files complete through March, 1971. So, this would bring an individual right up to date, and, except for a three months lapse in time when the document is in the clearinghouse being processed, we have almost immediate access to any research or instructional document that is being done and that the ERIC system is aware of. So, either the printout from the computer search or the compilation of abstracts and bibliographies from the library manual search are then brought together and sent out to the person who has requested the search. Keep in mind that the individual just has abstracts or, in the case of journal articles, he just has a one or two-sentence annotation of the documents we have identified.

So. he has to review all these documents, and then select the ones that are relevant to his needs. Then, he requests the microfiche from the RCU or from the Regional Resource Center here at Nashville State Technical Institute, for example. In your case you wouldn't have to come all the way to Knoxville to do a manual search, but, if you desire a computer search, you would need to come to Knoxville for a conference regarding your interests. After the request for microfiche is sent in or brought in, we retrieve the relevant documents from our microfiche files, put them in a package, and mail them all back to the user. He can use them as long as he has access to a reader or a reader-printer. If he does not have access to one of these machines, he will probably need the documents in hard copy. Of course, this is a little bit more expensive. If we have them as part of the RCU library, however, the hard copy will be sent to him on a loan basis and the user is free to xerox materials as he wishes. So, it really doesn't cost you anything to use our library if you don't purchase personal copies of everything.

I know some of you are familiar with the ERIC index and know how to use it, but I'd like to review the procedure just to be sure. (Transparency No. 5) I have also set up a little display on the table in the corner taking you through the complete procedure of selecting your index terms from the Thesaurus, looking in Research in Education subject index, and so on. There are three major indexes all in the one publication: subject, institution, and author. So you can retrieve a document in one of three ways. After you consult the Research in Education index under your appropriate descriptors, and in your case it may be vocational guidance or guidance and counseling, job placement, vocational placement, or whatever, you note the ED number and turn to the corresponding ED number in the front of the index where you will find a resume of the complete document. After you have read a 150 to 250-word abstract about the document, you may decide it is not what you really want after all. So, you are able to eliminate it without going to the microfiche files. If you do want it, then you need to request the document by the ED number which always consists of six digits. We retrieve almost everything by ED number. We don't need a title, author, or anything else unless you should happen to have an incorrect ED number. So, if you request by mail, you would, for example, come to the Regional Resource Center here at Nashville State Tech and tell Mrs. Groves or Miss Turner that you would like a particular ED document on microfiche. That's all you really need to do. You can fill out a request form with your name on it and we will send the material directly to you or we can send it to you in care of the Regional Resource Center here. Of course, the microfiche copy you will receive will be the complete document, including the bibliography. It's not just a rehash of the abstract. It is the complete document just as if you had the original hard copy. Every page is filmed and put on microfiche, even if it just has one or two words on it.

I brought a map today to give you a little bit better idea of where the other Regional Resource Centers are located throughout the state. (Transparency No. 6) The RCU, of course, is located in

Knoxville. Existing microfiche collections with the dash indicate that there are microfiche collections, in other words, partial ERIC files, not necessarily complete, at Tennessee Tech, Peabody, and Memphis State. Now, in talking with the people while we were setting up the Regional Resource Centers it was necessary to contact them to see to what extent the public was able to use their microfiche files. In most cases the ERIC files were seen as a supplement to materials that they already have, and not as a replacement for these materials. In some cases the reader was used very little. So, you see, we had to eliminate them altogether as even existing in terms of the personnel we were interested in serving, or in terms of vocational teachers or all teachers in the state being able to use them. There was no one there designated to instruct the individual in the use of the ERIC system. You either had to know or go in and find out for yourself. So, we placed a Regional Resource Center in the Memphis area and in a few other areas where partial collections already existed but weren't available for public use. The Regional Resource Center here at Nashville has been used considerably since it has been in existence and I would like to encourage you to use it often. I think you have a real advantage in the fact that two persons have been instructed in the use of the ERIC system and are here to help you learn. Mrs. Groves and Miss Turner both appear very helpful and are very eager to help you. They are both very familiar with what the ERIC files consist of and have a total picture of ERIC as a nationwide information system in education. They also can give you some idea of what is there and not just in the area of vocational-technical education, but in all areas.

Now, may I answer any questions for you?

NOTE: See Appendix, Pages 166 - 171 for Handouts.

ELECTRONIC ENGINEERING TECHNOLOGY

Wayne Jones
Assistant Professor
Nashville State Technical Institute
Nashville, Tennessee

You have heard the term "technician" mentioned at NSTI. Since your background is counseling you may not be familiar with this term and I would like to give you a brief analogy of where an engineering technician is in the hiearchy of engineering as compared to the medical profession.

Professional Engineering	Medicine
4-year Engineer	Medical Doctor
4-year Engineering Technologist	Medic
2-year Engineering Technician	Registered Nurse
Industrial Technician	Licensed Practical Nurse
Craftsman	Nurse's Aide

There is one interesting point in that in the medical profession you cannot advance into a different category unless you take additional training and academic work. In the engineering profession, however, each person can advance on his own merit. A four-year engineer can do design work and a two-year technician can also do design work if he had the ability. You are not limited by social laws, only your ability.

To further define the academic difference between a four-year engineer and the technician we would have to look at the science and math areas. An engineer is probably 90 percent theoretical and 10 percent application oriented while a craftsman is 10 percent theoretical and 90 percent application. The engineering technician lies somewhere between these two extremes.

An engineer may be interested in the effect of temperature on electrons on the dark side of the moon. The technician would be more concerned about the normal temperature effect on an electron at room temperature here on earth. The analysis of these types of extremes involve different levels of math.

The engineer may use differential calculus or advanced calculus, while a technician may work with basic calculus and differential equations. The engineering technician primarily uses algebra to solve most of his equations.

Technicians and engineers usually work in teams. The engineer may have several technicians under his control. Since the engineer is now theoretically oriented, the technician has someone to go to for answers to some problems.

Two-year engineering technicians have an option after graduation, to go to work or to continue their education. With the two-year Associates Degree he may go on to get his B.S. degree in engineering technology with only an additional two years. This approach is referred to as the 2 + 2 program. The end product is a technologist (B.S.)

There are no 2 + 2 programs presently in the state of Tennessee but they are available in other states (i.e. Southland Institute, Georgia).

To bring some of the things that I have mentioned to a conclusion, I would like to offer you a tour of the electronic laboratories. In the lab I hope to bring out the program in more specific detail. These details will consist of theory, it's application, and the equipment involved in our courses.

BUSINESS DATA PROCESSING TECHNOLOGY

James Marable, Head
Business Data Processing Technology
Nashville State Technical Institute
Nashville, Tennessee

The greatest problem we have in Data Processing is the orientation of prospective students to an understanding of the function of a computer in a business environment. As an example of confusion, can anyone here explain the words "Data Processing"? It is really simple, turn the words around and you have your explanation - "Processing Data", that is exactly what the words mean. So, by virtue of this problem rather than spend time on curriculum, which is available in the bulletin, I believe it would be of greater value to enlighten you on the function of a computer in business and how a technician dovetails into this operation, so that you as counselors, can relate this to the students yourselves. Our first attempt will be a tremendous film that presents an overview on how the computer works by using people as an analogy; a description of what a program is; and how it works; and the different computer applications that are currently being employed. The film is titled "Man and Computer a Perspective" and will run approximately twenty minutes. Next, Mr. Grinder, Assistant Professor in Data Processing, will cover DP job titles and a description of each. Also, you will receive a handout of the titles and descriptions. Our final exercise will be a tour of our outstanding computer facilities with an explanation on how the equipment is used and how it relates to the topics covered in the film.

(After The Film)

The film pointed out numerous computer applications, but did not point out that the majority of computer applications are business oriented. In other words, the computer is used primarily to keep business records and produce business reports. By virtue of this, Nashville State Technical Institute is involved in training students to apply the computer in the business areas; therefore, the program is appropriately entitled "Business Data Processing". Many of the technical institutes and colleges do offer a program entitled, "Computer Science" for students who prefer to work in a scientific environment, but, from past experience, we have not seen an appreciable demand for these technicians.

Technical Education in Data Processing is not new to Nashville. The data processing program started in 1964 and was administered by the Metropolitan School System until the Institute was developed by Mr. Weld, the Director, who incorporated the program into NSTI. Because of our previous existence, the program has placed many of the DP managers, programmers, and operators in the local area. I personally know of one of our graduates who is earning a salary of $16,000 per year and do not know of a graduate in the past four years that did not acquire a job after graduation.

Data Processing has been a wide open field with unlimited opportunities and I believe this will hold true in the future. So, our graduates have a unique position for immediate employment and the potential for unlimited promotion, because they are working in the heart of the companies' accounting systems in computer conversion and maintenance. So, as counselors please advise your students interested in Business Data Processing to take all the business courses available, especially accounting, and at least one year of algebra.

NOTE: See Appendix, Pages 172 - 174 for Handouts.

BUSINESS DATA PROCESSING TECHNOLOGY

Raymond E. Grinder, Jr.
Assistant Professor
Nashville State Technical Institute
Nashville, Tennessee

I would like to direct your attention to the job descriptions that have been distributed to you. These are computer-related job titles that are presently being held by the people around town in the different industries who are doing the computer and data processing work. This classification allows the management of an organization to separate the different functions that are performed around a computer center into job types that are then filled with people of the appropriate level of training and experience. There are three types of beginning programmer jobs and higher level positions continuing through experience, advanced, and senior programmer. These higher positions are ones that our students will work toward after entering an organization at the beginning level. The slot in the company for which we are preparing the students is the beginning, non-college trained programming position.

I have worked in the computer programming area for approximately six years prior to joining the staff here at Nashville State Technical Institute. One of the things that I have found to be most noticeable about tne profession is its emphasis on your ability to perform regardless of your background and training. For instance, a college degree may be instrumental in your getting the job initially but once you are accepted into the organization you are expected to produce. This means writing programs, producing reports on time, etc. In this respect, I feel that this field has quite a bit to offer young people because it gives them a chance to be evaluated on performance instead of some pre-conceived idea of what a successful person in the field should be. It has been my experience that people without a college degree fare as well as those with a degree and in many instances do better.

I think the employers are going to be pleasantly surprised with the students that we graduate here based on their ability to begin with very little training and to advance to the status of being a productive employee in a very short time.

One of the additional benefits of the training here that I have noticed is the ability of the students to obtain the lower level jobs in data processing after taking only a few courses here. These students will generally hold these jobs through the duration of their stay here and be in a good position for advancement upon graduation.

We are primarily trying to train our students so that they will have a sufficient background to enable them to enter a data processing center and be familiar with the equipment and computer languages to the extent that they will be productive in a minimum amount of time. In this regard, I believe that we have been successful.

THE EMERGING WOMAN: IMPLICATIONS FOR THE SCHOOL COUNSELOR

Dr. Gilda Greenberg, Associate Professor
University of Tennessee at Nashville
Nashville, Tennessee

In the past few years, many articles have been written about the changing role of the American woman.

Before counselors begin to set procedures regarding the counseling of girls and women, a brief review of some underlying historical and cultural perspectives should be examined.

Although there were women who attempted to change the image during the 18th century, it was not until 1848 that feminism became fully organized in the United States. This occurred during the First Woman's Rights Convention in Seneca Falls, New York. The road ahead was still traversed with many obstacles since there were factions which forcefully verbalized the female's "natural tendencies" rather than her potential attributes. The changing role of women could, therefore, be ascribed directly to the industrial changes of the 19th century. The impact of technology, on the reduction of home chores for middle-class women, increased the amount of time available for activities outside the home environment.

After World War I, dramatic changes became more apparent due to the increase in the employment of women in the labor force. The period of the 1920's can be considered the "superficial mark of a new social equality." It was during this time that women began to smoke and drink in public, participate in new intellectual, economic, and sexual freedoms. The most dramatic revisions, therefore, could be traced back to the early part of the 20th century.

The knowledge that society conditions most of our responses, actions, attitudes, and emotional behavior, should be given serious consideration in an investigation and analysis of the changing image of the American woman. In Margaret Mead's study of primitive societies, we see that male and female do not necessarily assume roles because of maleness or femaleness. Cultural patterns have tended to make the requisite adjustments for both male and female. This is well-developed in the study of the Arapesh in New Guinea where men and women exhibited some similar characteristics. (Mead, 1963).

As the trend toward equal status between men and women in American culture persists, the cries of "unnatural" and the "demise of our culture" are heard occasionally from the barren depths of the voice of the traditionalist. We have seen that many societies have existed and flourished in which the roles of male and female, as viewed in Western culture, were reversed.

Plato foresaw the future perceptively when he said, "no occupation of social life belongs to woman, or man because he is a man, but capacities are equally distributed in the sexes, and woman should naturally bear her share in all occupations."

In the last fifty years, the physical changes in transportation, communication, and conveniences have been unprecedented. Revisions in attitudes toward life have also been observed. Increasingly, women have been outside the home because of economic necessity; the advancement in women's education; the elimination of domestic drudgery; the development of female talent; and the longevity of women.

Whether the idea of more involvement in the labor market appeals to all women or not, the status of women in our society is changing significantly. Those who deny the impending and ongoing changes are basing their conclusions on obsolete ideas of a previous generation. Others, who seek wider range of opportunities, suffer because avenues of self-expression and individual development supposedly open to them are still inaccessible.

Today almost half (49%) of all women 18 to 64 years of age are in the labor force. In 1920, less than one fourth (23%) of all women 20 to 64 years of age were in the labor force.

The reasons for the increase of women working outside the home have become much more complex than the primary economic one. More important, is the fact that it is now socially acceptable for a married woman to work. It no longer reflects upon the husband's ability to support a family.

Today's woman is in the process of "becoming," but the breakdown in outdated cultural concepts of the value of the female still needs revision for her to fully utilize the latent talents that she possesses.

In 1930, women held half of all professional and technical positions. Currently, they hold only one third of such jobs. In March, 1966, about one fifth of the working women who had completed four years of college were employed in clerical, sales, service jobs, or as factory operatives. Only eight per cent are represented as scientists, three per cent as lawyers, one per cent as engineers. Traditionally, women had a major role as teachers; yet, on faculties in institutions of higher education, they represent only 22 per cent today as compared to 28 per cent in 1940. Women comprised 55 per cent of all service workers in 1966 as compared with 40 per cent in 1940. (U.S. Department of Labor, 1967.)

In 1967, women earned 40 per cent of all Bacheior's degrees. At the Master's degree levels, women earned 35 per cent. They earned 12 per cent of all Doctor's degrees in 1967.

By 1965, the pay gap between men and women was wider than it was a generation earlier. On the average, women earned only 59 percent as much as their male counterparts in the same field. Of the 34 million women who worked at some time in 1965, 18 percent were widowed, divorced, or separated from their husbands. (U.S. Department of Labor, 1967.)

Statistically the compiled data indicates a grave situation pertaining to women. As compared to 25 years ago, the female appears to be in a disadvantaged position.

The concept of differential sex roles in our society has been a deterrent to the development of the full potential of the female.

In the postwar period, two American women won Nobel prizes. The National Academy of Science selected five women to membership. Newspaper women won five Pulitzer prizes. Women authors won thirty-eight more. As leaders in society, we can list women like Esther Peterson, Margaret Chase Smith, Maureen Neuberger, Clare Booth Luce, Oveta Culp Hobb, and many others in positions previously thought of as only for male occupancy.

In order to foresee any noticeable change, the learning processes from early childhood should permit and encourage the female to maintain the same equality as the male. Studies of primitive societies gives credence to the knowledge of cultural conditioning. It is, therefore, imperative that the individual be considered for his or her attributes, and that only this should be the basis of comparison, not maleness or femaleness.

The woman requires the same privileges as the man in seeking an education, working towards a career, marriage and parenthood. She also has the right, or should be permitted to enjoy the right, to remain single, childless, or single with an adopted child. In the past few years single men and women have been given the opportunity to adopt youngsters. The results have been quite satisfactory. The present ethic which implies parenthood is a necessary part of marriage is outmoded and of no relevance in today's overpopulated world.

We are presently in a period of re-examination. Perhaps with greater insight, a stronger commitment to the individual's right of choice will be formulated. Equality for women can only be achieved if there is a continuing effort on the part of our total society. To move forward, the following steps should be attempted and implemented:

1. Equal education opportunities for men and women. The only selectivity should be based upon intellectual ability and aspirational drive.

2. Women should be encouraged to attempt full intellectual development and to promote their leadership abilities in all phases of life and work.

3. Elimination of discriminatory practices in industry, business, and the professions so that women may assume an equal role in the so-called "male" positions.

4. Experimentation by industry in providing flexible scheduling for the greatest utilization of female talent. This may involve part-time, full-time, or a combination of patterns.

5. Young women need to be counseled regarding the alternative choices of life styles in our present society. This is of paramount importance in developing an understanding of the changing image of the American woman.

In addition to the need for general support in changing society's attitude towards women, the school counselor has certain responsibilities in counseling with girls.

At the Elementary Level:

1. Exploration of the world of work should be pursued without gearing the materials to female-oriented or male-oriented careers.

2. The role of the woman needs to be portrayed in a manner that permits the young girl to identify with the many life styles that may be available to her rather than the mother role portrayed in the texts.

At the Junior High and Senior High School Level:

1. A continuation of the analysis of self through group counseling is essential in preparing the young adolescent to perceive alternate choices in educational and career planning.

2. Beginning at the ninth grade level and continuing through the senior high school, the counselor should provide opportunities for personal contact with successful homemakers, career women, and women with varied life pursuits.

3. The counselor, as an agent of charge and disseminator of current information, needs to place special emphasis on procuring data regarding changes in opportunities for females as she would in working with other disadvantaged groups. Materials are available from the Department of Labor, the Department of Commerce, Health, Education & Welfare, and the President's Commission on the Status of Women.

4. Of great importance is the development of a special Re-education Program for Parents. The research data regarding influence of parents in choice of occupations makes it imperative that group meetings be systematically scheduled to up-date parents on the new role for women in the years ahead.

This procedure implies a responsibility of active involvement on the part of the counselor in promoting greater equal acceptance of women in education, industry, and the professions. We can no longer permit this disadvantaged group to continue, in an era of affluency, without equal opportunity for self-fulfillment.

The role of the American woman will reflect not only the pressures of world economy, but the images we are capable of projecting into the larger social milieu. Each individual, male or female, black or white, can then ask himself how he may make the best possible contribution to the world and humanity. The social climate must permit this change if the image of women is to assume its dignity and purpose in life. Society and school counselors must now assume major responsibility in developing the necessary conditions for creative change.

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NOTE: See Appendix, Pages 175 - 176 for Handouts.

CHEMICAL ENGINEERING TECHNOLOGY

John R. Hallman, Professor
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My name is John Hallman. I'm head of the Chemical Engineering Technology Department here at Nashville State Technical Institute. This morning I'd like to talk to you briefly about what we have in mind for our program here.

There are two types of programs in Chemical Technology. Both use equivalent programs but we have tried to distinguish ours as being Chemical Engineering Technology. In Chemical Technology, which you would find in our two sister schools at Memphis and at Chattanooga, the emphasis is primarily on the analytical side of chemistry, that is the analysis, testing and programs like that, and not on the engineering part. Our laboratory is essentially the same. We'll have one more laboratory here than the other two schools will have. Our chemistry laboratories will be identical, except that we'll have a little more room than they will. But the emphasis on the courses at first in the chemistry itself are alike. Where we differentiate is that our work will be primarily toward process orientation. By process I mean in the part of chemical industry where a young man or woman can direct their work in an engineering laboratory or pilot plant which is production on a small scale, or on the main production line itself, manufacturing some chemical.

In the oil industry our people could very well take their place in working as an engineer, or with an engineer, on the big catalytic crackers or any of the large units of instrumentation or other similar pieces of equipment that are in the process. Typically, these plants can occupy a half mile square area, such as those which make gasoline.

I know a couple of counselors; I have been visiting them. But I find that one of the questions that is of most concern is: What studies should a high school student take? Well, for Chemical Engineering Technology, my own preference would be that they have physics first, and not necessarily chemistry. Our course here is taught as if the students have never had chemistry before, and this eliminates some of the problems. Our emphasis is a little bit different, as you would expect, than the regular high school chemistry courses if they have the physics course where they learn a little bit about the metric system and some of measurements. Also, they learn something about the physical world about them, then I don't have to sit down and explain the difference between an inch and a centimeter. That takes time, and time is something that we don't have in our curriculum because of the amount of information that we are trying to make available to the student. We hope that they can comprehend and assimilate as much as possible.

As for math, I would like to see the students take just as much math as they can possibly get in high school. Now in freshman chemistry, algebra is probably the main subject that they learn; they become acquainted with logarithms; they become acquainted with decimal systems, also fractions and ratios. This is probably the first time they have seen a positive or practical illustration of the reasons for studying the mathematics. So that if a student is going into Chemical Engineering Technology, the more math the better. We have one feature here in our course that they take one more quarter math than any of the other technologies, simply because there is a bit more calculus required in the engineering part. So far, the other technologies have not completely needed the advanced material.

I want to tell you something about these chairs. I noticed some of you remarking about how big those plates are. That chair was made to fit me--plus five inches. I tried several varieties. I wiggled in and measured the distance to be five inches between me and the chair. If you notice the plates on these, you can get a large book on them. Well, my experience has been that it's nice to have a book and a notebook and everything else, so I chose a large one. If they'd made them bigger, I'd have gotten it. But there's only two classrooms like this--physics and ours. You can lay open a notebook and a book and still have room for note writing. And if they'd made them yard size, I think I'd have bought those too.

Now, what do we do at NSTI? The program, the first year, is almost identical to that in the other technologies with one exception--we have chemistry. All students have the same math, the same physics, the same English, the same social studies, economics, human relations, and management systems; and all will take the same FORTRAN Scientific Programming. But where we differentiate again is in the first year. Chem E Techs have two quarters of general chemistry and one of analytical, in this case qualitative. In the second year, we have the additional math course. We take a course in elementary thermodynamics. Now this scares everybody. And all this word means is that we're going to teach them a little bit about energy balances and a little bit about material balances.

It's the same type of system. If you can remember back to coal fire furnaces, every so often you had to replenish the locker with coal. Well, our fellows will be studying what happens in a furnace. They will have to account for all the coal thrown into the furnace, how much heat comes out, how much ash is left of the coal, and how much gas goes out the flue. Now this is a typical material balance. Energy wise you have to take account of how much energy was in the coal when you threw it in there, how much energy you get in the way of heating, how much energy goes up the stack, and how much comes out in the ash. There is some difference, but they learn to do this balance. One illustration is similar to driving your automobile. If you have a "gas robber" where you have one-inch lines going from the

gas tank to the carburetor and every time you look at the gage it sits on E, you're not getting very much efficiency. So the fellows will be able to make measurements on a car and find out the efficiency of its engine. Again, how much energy are we getting out of the mode of power versus how much you put in. Another thing is, how many gallons you put in for how many miles you get. The boys, again, learn how to use the practical systems and the required calculations. This is thermodynamics.

They will take two quarters of organic chemistry and a quarter of quantitative. Now quantitative chemistry is the one that requires the most work because it is the one which has to be performed in an exact manner. The grades are based primarily upon how accurate you are in your development of procedures. This is the thing that companies are very very explicit about, because depending upon the accuracy of measurements and the accuracy of calculations, the company is going to make a profit or have a loss. And a one percent error in one of the chemical analyses can mean several hundred thousand dollars a month. And companies get real upset when they lose $100,000 per month.

Engineering wise, we're going to have a system known as a building block, an erector set, a tinker toy, or something of this nature, which is different from the regular schools that teach Chemical Engineering Technology. These latter have a system concerned with the study of one subunit. For instance, what I call a heat exchanger--this is merely an instrument which allows us to heat a fluid or cool a fluid by means of some other mechanism. You can either have a steam to heat it or cold water to cool it.

Well, our idea is not to study this thing by itself, but to take this whole system. What they're going to do is take different pieces of equipment and I'm going to give them a little plan and they will build a chemical plant. And, they're going to have to run it. This means that they're going to learn some plumbing and pipe-fitting. They're going to learn to use a transit to get horizontal lines, because . . . you know you don't like your pipes to curve; you like them straight. Ever look at the pipes in your house? You can tell a plumber by his trade. If the pipes are nice and straight, that means he knows something about threading pipe. But if you find where the pipes wiggle, that means that he didn't do a very good job. Something else we teach them, hopefully, in an all copper system, don't use steel nipples. And incidentally, I bet most of you have them installed. How many of you have the copper system in your house? OK. The contractors have a nasty little habit of putting in a copper system, but that place between the copper tube and where your spigot turns on is a little steel piece called a nipple. And they can save themselves a lot of money to <u>your</u> detriment, because it takes about four years in the water here for that nipple to wear out.

Now this is something that we're trying to teach them. The practical application--don't mix metals. The practical application that they would find in the chemical plant because, let's face it, we are in a capitalistic system and as such, stockholders like to get some return on their money. If you could save a company a little bit of money, it may take a while, but there is some gratuity that comes back in the way of promotions and raises. So in all of this we're trying to give them an idea, using their ability to think and to use a little bit of common-sense. When in doubt, don't go back and read the directions. You've seen "When all else fails, read the directions" on a piece of equipment. Same thing. Only this time it's for real. Have you ever seen a chemical plant blow up? You lose sometimes several acres, maybe even a quarter of a square mile. And again, chemical companies get rather unhappy when their plant disappears. So do all the people in the plant at the time it disappears. So, another thing we try to emphasize is safety.

Now we have a couple of things around here which all the students come in and take a look at and ask what it is. And I say that's a safety shield. I've got a number of them here. If I'm doing an experiment that is dangerous and may emit some gases that are explosive, like hydrogen, I put three of these in front of the students and one which I work behind so I'm only risking hands instead of me.

Some of the fellows have already discovered that some of the gases we make are explosive, and I'm a little nervous around the explosives. And I'm trying to teach them also to be a little bit nervous about explosives. We have a rule that every chemical that they operate with is treated as if it's nitroglycerine; so that when you set it down on a table, you don't bounce it. You taste it and it may be cyanide and that's the last taste you'll ever make. Then again, it might be just common table salt. So when in doubt, DON'T. The other thing is you don't stick your nose in a bottle. Because when I see a young man doing like that, I give him a bottle of ammonia, concentrated. I guarantee that he'll never smell anything again--because when he gets up off the floor, he's going to walk around in a daze. Have you ever smelled ammonia? It makes your hair stand up. But concentrated it makes your hair stand up and then it falls over when you do. It is potent.

Now when we go to the laboratory, I'll show you some of the items that I'm trying to equate the young men with from my background in industry. In aerospace, when you're working with about 500 tons of liquid oxygen, and 500 tons of RP1, a type of gasoline, and you don't want to mix those two except in the rocket engine. We had an explosion one time when they were mixed, and it took 18 months before we found all the pieces. We rebuilt the complex again because it blew apart. It blew parts of our complex a quarter of a mile. And that's a long way when it's a five ton chunk of concrete. It also made the biggest boom that they've ever seen in Florida. They thought

they'd been bombed; looked just like an A-bomb. This is what we don't want. So again, safety is a big consideration.

Job Opportunities: The laboratory that I came from in Oklahoma called me this spring and said they had an opportunity for one of our Chem E Tech's next year to come and work at this laboratory and be on the staff of the University. His job would be to design and help the masters and PhD candidates build their research equipment. And if this young man would like the opportunity, we will provide the money and the time for him to go to the University of Oklahoma and get his Bachelor's degree in Chemical Engineering. It would take him about four years. There is an opportunity that may come once in a lifetime. I do have one young man in the curriculum that is interested in leaving the state.

We have one man on our Advisory Board who is partner in the company of Waste Water, Inc. It's an anti-pollution company who is sampling and developing anti-pollution devices and systems for chemical plants. One of our young men is employed half-time, and when he graduates next year he will have an opportunity to go into full-time service. We have letters from companies in Chicago and Alabama which said: "We think we like your program from what we have seen. May we send interviewers down to interview your students to work in the design and development area of chemical engineering equipment?" Right now in the state of Tennessee, there are no schools offering Chemical Engineering Technology. In fact, there is only one school in the entire Southeast and that's Southern Tech in Georgia. We don't have much competition; however, considering all of the present unemployment, chemical engineering technicians do have opportunities for employment because there are probably no more than 15 schools that are accredited and which train chemical engineering technology students. The others are all analytical chemists, which is fine; they are needed also. Last year in the state of Tennessee there were 278 jobs for Chem E Techs, but there weren't any Chem E Techs.

In talking to our friends at Tennessee Eastman in Kingsport last fall, they want to send a representative and also stated that they will hire the entire graduating class from this school for their plastics department. So there are opportunities.

Another asset is that Chem E Techs normally will go out from the school some $50 per month greater in starting salary than the other technicians. One of the reasons is that it probably is the most difficult of all of the technology curricula.

It's six quarters of hard work. There's much homework and there's a great deal of study. One of the reasons is that in our freshman year we are actually studying both freshman and sophomore courses. In the second year of the three quarters, we are giving courses that seniors get at Vanderbilt. That's the difference.

We have no fat in our program; it's all technology. There's no humanities, no history, no psychology, no physiology, no philosophy, nothing like that. It's all technology. This is a problem because if a student wishes to transfer, although we are not developing transfer credit, they do have some difficulty. For instance, the English we teach is toward technology, and not the literature type English. They study no literature. If a student should want to transfer, I feel that about 75% of our credits will be acceptable at any school around. The one area that he would be lacking would be in the humanities. He would have to take another course in English, courses of history, a course of literature, and whatever else would be in the first two years.

Now we have kind of a little working arrangement with Dr. Threadgill over at Vandy; he wants to bring some of his students over and use our equipment when we get it built, and we hope to take some of ours over there and let them work on his apparatus. There is quite a bit of difference of emphasis. Our people are laboratory oriented, being the practical side of chemical engineering. Where theirs will be the theoretical. We will actually have by next year a chemical engineering laboratory that will be far greater in extent than anything that they have at Vanderbilt. Deliberately so, because our people have to learn technology. They are not going to be the big designers; they don't have the background in math, the background in chemistry; but they do have the background that they can take the idea from the engineer and put it into a practical application, design it, build it, and operate it. And that's the difference.

All of the emphasis that we have in our Chemical Engineering Technology can be applied to pollution control. On the final test, I asked these fellows: "Now that you've taken this course in qualitative analysis, how would you apply it?" Every one of them said he'd go down to the Cumberland and find out what all's in it because this is what they have learned. They can take any stream coming from any plant and with the techniques they have learned in the lab, they can analyze it for what's in it.

Next year they're going to find out how much is in it. We have in our lab a special technique. The first thing we do is to go back to the old time chemistry where all was done by hand. Then (we had hoped to do it this year, but we haven't got the equipment yet) we're going to take him to the sophisticated equipment that a laboratory would normally have available to do this work. What took him three days to do to find out what was in it, we can do in one hour on one piece of equipment which you see over here. It is called a polarograph. It is our intent that in all of the courses of chemistry, seven of them, the students will do the old-fashioned method of learning technique and learn the mathematics that goes along with it. Then we give him the piece of equipment which shows him what the laboratory does today. We could go strictly to the laboratory or to this nice $1,000 cabinet and teach him how to do it. I

could take a boy off the street who never went past tenth grade and tell him how to put the stuff in, turn it on, read the dials, write it down, and turn it in to somebody else. Or, they can learn the old-fashioned way and they know what that piece of equipment is doing for them. There's a lot of difference, and they're appreciating the fact that everybody may not have that nice piece of equipment in their laboratory.

Again, the emphasis is on practical engineering. Every laboratory that I've ever been acquainted with or worked with when I did my research and took my sample to be tested, all they did was say, "There's the equipment. You took chemistry; you run it." So this is what we're trying to do. These students are getting a strong background in chemistry to be able to analyze their own materials and know if they're right or wrong or if they've done something wrong. But primarily they will be out in a pilot plant (like we're going to be building over here) making chemicals in small amount. In industry, perhaps it's a 100 gallon per day unit.

Suppose a company is going to be making a new type of gasoline. Well, you can't go out and spend 30 billion dollars and build one square mile piece of plant, have it built, put it on the stream and it doesn't work. Because people get very unhappy with all that sitting out there not working. So before you go to that size, you build a small model that would fit in this room and you find out if you can actually to the process. Now maybe the chemist can do it in the laboratory in some glassware, but that doesn't mean you can make a plant out of it right from there. There's a middle stage. So this is what our fellow will be doing--the middle stage. Or they can go into a chemical plant such as we have at Stauffer, DuPont, and work on the line being in charge of a process, making one of the polymers. They would be the fellows between a craftsman - the one turning all the dials and switches - and the engineer who designed the particular unit of the piece of equipment. They're the ones going to be running processed or they can also be the the ones doing the troubleshooting.

Chemical Engineering Technology is really Mechanical Engineering Technology with a lot of chemistry. Because instead of just air, steam, water, Freon of your refrigerants, a chemical engineering technician must be able to handle any kind of the two million chemicals that we've got wandering around the face of the earth--whether they are manmade or natural. And there are such things as sulfuric acid that has a very funny effect on pipes. Some pipes it doesn't attack, but some pipes it will. And if you make the mistake and you put the wrong pipe in there, you're not going to have any pipes very long, I assure you. So they must know how to handle chemicals.

Polyethylene is a great material. We use it . . . any plastic is a part of our life, but not every plastic is good for every application. Now some of these things in here are plastic (I think polystyrene). They're very good, but if I were to use certain solvents in here as a part of a demonstration and any of the fumes got into that light it would get saggy in the middle and fall right out because it dissolved. So, the application. We use plexiglas here mainly because people coming in are real funny. And elbows cut if you run them through glass. You could shatter this if you pushed hard enough, but it sure saves people. Plexiglas has a great many applications, but not all of them will work everywhere. So we try to teach them all the applications we can from a practical standpoint. We're going to try to get the students to where they can use this education as soon as possible to be an asset, not a liability.

INDUSTRIAL ENGINEERING TECHNOLOGY

Roscoe B. Shain, Jr., Assistant Professor
Nashville State Technical Institute
Nashville, Tennessee

I'd like to welcome you to Nashville State Technical Institute. I'm Roscoe Shain, and I teach in the Industrial Engineering Technology Department. We have one instructor and approximately twenty students at this time. We should double our enrollment next fall, and we will have another instructor July 1.

Is there anyone here that's familiar with Industrial Engineering in any way? Industrial engineering is a little different from most of the other disciplines in engineering. We're concerned more with the methods of operation of industrial plants. We get into personnel work, to plant layout in engineering new plants, and also alterations of existing plants that have to be reworked because of product changes. Industrial Engineering Technicians also work as safety technicians and time study technicians. I'm sure you've heard of the efficiency expert, the man who goes out with his stopwatch and makes a time study of an individual doing a particular operation, particular job, then sets a standard time for this job based on the average time it has taken the operator to do this job plus what the technician feels is a leveling factor which means nothing more than the efficiency with which this person is working. Of course, this information is used throughout the company for cost purposes and several other reasons. We also get into production control, production management, and also developing wage incentive programs.

As you see, we cover a large area. All of these areas are concerned with the efficient production of products to the most economic advantage. Most of the work for industrial engineering technicians in the past has been in the field of motion and time study, setting standards on jobs. Recently we have had opportunities for our industrial engineering technology students to go out and work in industry with one of the local companies here. The students were making a work sampling study. The company had some forklift operators who they were anticipating putting on a wage incentive plan, and they used the technicians to go out and make a work sampling study and observe what the operators of these forklifts did.

I have with us this morning one of our students, Bruce Vaughn, who is an Industrial Engineering Technology major. I think he would like to talk to you about this experience and how it relates to his course of study here.

REPORT ON WORK SAMPLING STUDY

Bruce Vaughn
Industrial Engineering Technology Major
Nashville State Technical Institute
Nashville, Tennessee

About a week before spring vacation the head of the IE department at Aladdin Industries contacted Mr. Shain and asked him to find some interested IE or ME majors who would like to work during spring break. I was one who worked and I would like to tell you about what I did and what I think about the experience.

The first day they took us to a conference room to tell us about the study that they were running. Aladdin, as you may know, mainly manufactures thermos bottles and lunch boxes and lunch trays for airlines. They make all their plastic parts; they make glass fillers for their thermos bottles. These parts are put together on an assembly line to get the finished product, and those assembly lines are fed by the line supply department which consists of several lift trucks which are in operation between the warehouse and the assembly line.

Aladdin had previously signed a contract with the union to work up an incentive pay system for the lift-truck operators. That is why we were hired. Each student was given a stopwatch and assigned an operator. Everyone was to follow his assigned operator and to write down each element of operation that he carried out and how long it took him to do the element.

What we have handed out to you is a far cry from what we ended up with. Each shift that we worked, we reported between 300 and 600 elements and times. At the end of the week we had recorded a tremendous amount of material, for about 40 different elements. We quite painstakingly tallied up all our data, breaking it up into different days and different elements. What we handed out to you is the finished product. Let me explain it to you.

The elements run across the top of each page. The first element you see listed says TLWH2STGA. This means Traveling loaded from warehouse to staging area. The next one is "traveling loaded from warehouse to line 203." That's an assembly line. Several others are "traveling loaded from plastics to line #223", etc. The next set of data is the traveling empty elements. They run the same way as the traveling loaded.

The next set of data concerns the finding of materials to be delivered by the operator. This includes walking and looking for something to be delivered, riding on a lift truck and searching, and looking through records in the line office to find where something is stored.

The next set of data is the Miscellaneous Elements which is fairly self-explanatory. All numbers are totals for certain elements on a certain day. We also included totals and the percentage of total time

spent on each element. That's the percentage of the overall time that we recorded.

An element of a job: an operator is assigned to take so many parts to a certain line. An element would be part of that operation. He's doing one certain thing at that one time and we recorded the time it took him to do that one certain thing, like to load the lift truck, or it takes him so long to unload it, or it takes him so long to travel from one place to another.

On our last page we included a graphical representation of a comparison of each element--the main elements really. You can see that search is way up there. That's why we also included recommendations on how to improve this search problem.

Shuffling is raising the forks to get something out of a bin and then set it on the floor. He may have an empty pallet, and he'll stack some on the empty pallet. Not needing all he had stacked up, he'd put it back on the shelf. I'd call that shuffling. Or like making 2 or more different operations to load. It's a form of loading, except loading involves merely taking it out of the bin and carrying it. Shuffling also meant that when they were relocating goods in the warehouse, goods delivered--cups for the assembly later on. They had no need for those cups until later on so they stored them in a warehouse. They had no system for where they put it in. So what would happen--the forklift drivers when they were idle, were given the job of relocating these goods so they could maintain inventory cards so that for future use they could know exactly where that piece of equipment is.

This experience was just a chance for us to see what we would be doing when we get out of school and getting knowledge about industrial operations and getting experience in industry before we graduate and to broaden our knowledge, and learn quite a few new things. I really am happy that I worked there because I did learn a lot. Some-several of us have worked there since in a vaccum bottle operation where they were losing quite a few bottles. They couldn't account for them. They had an old process which had been in operation for about 22 years; they're accounting system was showing sometimes losses up to 20%. So they stationed some of us at different points of production to sit there and count the bottles and to count the scrap thrown away and make a few other observations. That was another time we worked there, and I hope we get to go back again.

REPORT ON WORK SAMPLING STUDY

Edward S. Kovach
Industrial Engineering Technology Major
Nashville State Technical Institute
Nashville, Tennessee

Thank you Mr. Shain. I would like to tell you my ideas about the NSTI courses that I have taken. First of all, why did I select NSTI? Well, initially I had thought about attending a vocational school or college, but the state vocational school had a long waiting list and waiting period. Consequently I had to do something besides lying around. I then talked to Miss Rich at NSTI and she administered the NSTI diagnostic tests to me. The tests proved how stupid I really was. As Mr. Shain pointed out, practical experience is good (which I have), but what industry really wants is an idividual with technical training. I, too, found this out when I looked for employment upon my retirement from the military; industry wants somebody with a little technical know-how.

I am a high school dropout and lack technical training. So, there are several reasons why I came to NSTI. One, I couldn't get into the vocational school; and two, the tuition at NSTI is nominal. I attend NSTI as an in-state resident for $55 per quarter. I can take as many hours as I like during day and/or evening classes. For an out-of-state student the tuition is $135 for a quarter if I am not mistaken, which again is very reasonable for an individual who desires a higher form of education. The third reason I came to NSTI is that I only live about two miles from the school. There are many students going to school at NSTI who work. Fortunately, I don't have to work because of retirement and G.I. Bill benefits. However, it has been such a long time since I have attended any school that it takes me more time and effort to apply myself to learn the different subject material in my desired field.

Now then, something about the industrial engineering course. After talking to counselors, both vocational and high school, I found out a few things. For instance, my son's high school counselor could not or did not assist my son in any way; yet, my son received a four-year scholarship through his own efforts and application. I may be hitting a sore spot. Most counselors I have talked to as a prospective student or formally as an army recruiter don't know how to counsel a student. What I mean is that they don't readily have facts and figures and usually can't or don't advise the student what he should do based upon his achievements. My experience has been that the counselor could not cite a specific incident or when and where to apply for a scholarship. Also, I don't think taking a diagnostic test really helps a student. For example, when I talked to Miss Rich, I didn't know what I really wanted. I knew when I took the diagnostic that I would bomb it--which I did. Miss Rich then referred me to Mr. Moore at the school who further counseled me. I finally ended up with Mr. Shain who aided me in my decision of selecting Industrial Engineering Technology.

I think counseling does not stop with the counselor; I think it has a feedback with the department head. Thus, the individual can be shown and receive explanation of what the department has to offer. This type of counseling gives the student a better picture and helps him make the right choice. I think counselors should be better prepared on statistics in different technologies and should have names and addresses where a student can apply for scholarships, especially at high school level.

As for the Industrial Engineering curriculum, I found out that I had a poor background in math. As I stated earlier, I am a drop-out; and although I have had numerous and varied jobs in the military, I was never required to know any advanced math. My math results were pathetic on the NSTI diagnostic. I did not even know what the dot symbol represented nor the parentheses, brackets, or braces. I had to take the NSTI Math 10 review course when I enrolled. This course consisted of two programmed texts which helped me. The review course is five hours, one hour each day, which helps individuals like myself. Many kids fresh out of high school try to take advanced courses and usually flunk out. Also, being educators, you know that the state institutions must take first quarter students regardless of their ACT scores. At NSTI any individual can attend but he must take the diagnostic for placement dependent on his demonstrated ability. I think you get more attention at this type of institution than you would if you were attending some other junior college or university. In our drawing class last quarter there were only nine students. This gives the instructor time to circulate and help the student on an individual basis. The instructor can evaluate the student's ability plus help him if the student is having difficulty. The same thing applied in my math class which had fifteen students. Here again, the instructor had ample time to help the slow student and show him where he is making mistakes. I don't think this type of instruction takes place in colleges or universities. I was an ROTC instructor at North Carolina State College for three years and an army instructor at Fort Benning for two years and never had enough time to help students on an individual basis. At Fort Benning we also had closed circuit TV for instruction without the benefit of individual attention. I call NSTI a super high school because of the advanced subjects, small classes, and the individual attention the student receives.

I felt by attending NSTI I could bone up on my math, which background is a must when you are looking for a good job. I know I won't be a math whiz, but I will have a better working knowledge of it. I will also have a knowledge of engineering drawing, and will be able to converse intelligently with production managers and supervisors with the aid of my English courses. I hope to get a job as a supervisor based on my personal experience and the textbook theory I learn at NSTI. I'll be able to go and seek a job with confidence once I complete my studies here. I have been talking all day--do you have any questions you would like to ask me?

STUDENT SERVICES

Dorothy M. Rich, Counselor
Nashville State Technical Institute
Nashville, Tennessee

I am sorry to have missed the meeting at the Andrew Jackson Tennessee against Tennessee Education Vocational Counselors meeting. We had one of our teachers here elected vice-president, Mrs. Margaret Wares. I don't know if any of you know her or not. I feel very much at home with Metro teachers, counselors, and the rest of you.

I started out teaching from a formal school at Tennessee, Vanderbilt. From Long Island there I went to Highland Heights and then to North Ireland. I have been away from Nashville off and on. My last teaching was ninth grade English at Franklin High School in the early part of 1969. My counseling of course at Tennessee Tech. I have done counseling at Junior High and last year at Manchester. I came out here last June 15. It has been about one year. The first thing I did was to interview these students, as Mr. Kovach mentioned. I refer them to their departments and first find out where they stand. I always let them talk to someone in the department of their interested field so that they may get first hand information. Most of the counseling situations have been with people who thought it wasn't going to be as difficult maybe as it is. People that haven't had enough math, also. I have talked with them quite a bit. Some have found out maybe this wasn't their place. We tried to find a place for them. Most of the students here work full-time or part-time.

WORK, CAREER DEVELOPMENT AND ATTITUDES

Joseph M. Cozy, Ph.D.
Assistant Professor
University of Tennessee
Nashville, Tennessee

I would like to share with you a few ideas on the subject of attitudes related to work and career development. I have directed my thinking in this matter particularly toward our function as school counselors.

Permit me to start by making some statements you have already heard. When we are talking about work, we are talking about two major dimensions of human life. We are talking about work as a social phenomenon which can only be understood as it exists in a given culture and in terms of the social institutions of that culture. The church, the educational system, industry, political structures, legal structures, all of these, and more, make up the fabric of a society. In the final analysis, however, when we, as counselors, discuss the topic of work, let us emphasize that work is performed by individual persons, not by society. Individuals, no matter what society they live in, everywhere and always must at some time come to terms with a demand to work. The way individuals meet this demand is a problem of individual psychology.

Human work, then, must involve, on our part as counselors, an understanding of the conditions which influence a person's choice of a career, a vocation, a job. Our function as a result is not simply a social and historical concern, but it is at root a highly personal and individual one. We as counselors at this point in our relationship with students take on a special relevancy for the schools in which we work. In one sense it is in large part one justification for our being in the school as guidance people. Our function, in this respect, becomes much more than adequate information-giving service. Adequate information is essential and we must know what we are talking about or at least where to find the appropriate information. But, on a deeper level, when a counselee says, "Mr. Guidance Man (or, Miss Guidance Lady), I don't know what I want to do," or "I can't seem to decide about work," information is not enough. In effect, what the counselee is saying implies one of the most fundamental questions each one of us had to ask, and maybe are still asking, about ourselves. That is, what do I do with my life; what meaning shall I give to it" The most precious commodity we have is our personal lives. And, every counselee, even when he comes in to ask information about jobs, careers, college, or whatever it is - is asking, "Help me, what do I do with my life?" If we think about that for a moment, we will and ought to feel some reaction in the pit of our stomachs for we ought to be recognizing the tremendous responsibility we take on as guidance people. We are entering another person's life with a certain amount of potential influence. What do I do with my life? This comes close to dealing with the meaning of a human being, his needs, his hopes, his fears, his doubts. We are entering into this student's cognitive and emotional perception of his private world as he confronts the world around him.

This brings us to the subject of attitudes. We, counselors, are dealing with much more than a rational process and an information oriented relationship. We are dealing with the whole, often confusing, complex of attitudes that a student brings into our office.

Perhaps, at this point, a working definition of an attitude with which we are probably familiar will be useful. Let me refresh your memory. An attitude may be viewed as a learned, emotionally-toned, predisposition to react in a consistent way, favorably or unfavorably, toward persons, objects, situations, and ideas. So, it is a consistent way of reacting in terms of what a person has learned. But, the important factor is that it is emotionally toned. There is a set of feelings associated with the reaction when a person confronts another person or situation - liking or disliking, hostile or pleasant.

From attitude research two important notions emerge about attitudes. First, all the actions of individuals are governed to a large extent by the attitudes they have learned. Second, an attitude has three components. Bear with me in this bit of preaching. The first component is the cognitive component. This is where we counselors are concerned with accurate information giving. Second, the affective component, the associated feelings the counselee has toward the information he is getting related to persons, objects, and ideas. And, the third component is the action-tendency component. Every attitude involves some tendency to act out the information and associated feelings with respect to the object of the attitude.

Finally, on attitudes, it will be helpful to keep in mind an attitude is rarely an isolated condition of a person. We all carry around a whole complex of attitudes. Our religious attitude affects our social attitudes and behavior. It affects our work attitude, it affects the kinds of friends we make, the kinds of social relationships we establish. It determines in large measure the kinds of responses we are going to use in social situations. Rarely, then is an attitude an isolated factor you will be concerned with. Most often, it will be relative.

This description of the meaning of attitudes is hopefully something you will take back to your work. Perhaps, when you enter upon a counseling relationship, the description will cause you to pause for a moment to think about who is walking into our office no matter what topics are being discussed, whether skills, statistics, economics, social aspects of work, or job, or profession.

Whatever it is, work is a functional, practical, and essential part of the person in our society. There is no way, except by the most radical decision, a person can avoid coming to terms with the demand that he or she must work. Work in our society is pretty much specified in terms of jobs, kinds of skills involved. In most instances, work is fairly clearly delineated. It differs from leisure, from love, and from play in that it demands rather specific performances and has specific rules of behavior connected with it. One cannot work in a factory, business or profession without quickly becoming aware of the behavioral constraints one's job or profession places upon one. Students have to learn this. We all have to learn this.

Work in our society can be described in terms of occupations, jobs, careers, etc., but we counselors must keep in mind that there are factors over and above descriptions which influence both work-choice and work-behavior. Human work is an extremely intricate personal affair. So, we must be cautious of oversimplification.

To illustrate the need for caution and to emphasize the human aspect of our work as counselors, permit me to refer to a bit of classical research. I think you are all familiar with it but perhaps it will serve a useful purpose in support of what we are discussing.

The research is the famous Hawthorne Study (1924). It is a fascinating study - even humorous - as a scientific discovery of the complexity of humans at work. In the end, it was what the study did not set out to observe that proved most important. Let me refresh your memory about some of the details.

The study, set up in a standard scientific way, set out to investigate a wide-range of conditions such as lighting, rest periods, length of working periods, pay raise, number of breaks, hot lunches and so on, which it was assumed would affect work productivity. How would making these factors, favorable or unfavorable, affect the workers behavior in terms of production?

The unexpected result was no matter how the experimenters varied the factors such as lighting, hot lunches, etc., productivity continued to rise -- whether working conditions improved or got worse. And herein lies the tale.

Being honest researchers the experimenters discovered an explanation other than the one implied by their assumption. They discovered that they had made participation in this experiment attractive to the workers. The participants got a lot of personal attention. The experimenters talked to them. The workers were allowed to work in smaller groups, had communication with each other rather freely, and so on. The value of the unexpected discovery is that it showed, while the factors investigated may be important, attitudes and the human condition are even more important. So now we know that worker attitude and morale are more effective determinants of production in a work force than most of the physical work conditions we hear so much about.

Well, so what for us counselors. Whatever the counseling situation, whether concerned with decision-making about career, occupation, academics, social or economic situations, we are in the end counseling a person who is in search of meaning and self-esteem. We are counseling in terms of the attitudes and highly individualized perceptions of this person. If we really believe this we aren't so readily going to say, for example, "Look, according to test results, you can't go to college," or "You want to be a mechanic? Don't. You have too much ability." These kinds of things we have all heard. And, perhaps, if we have said similar things, they have probably come back to haunt us. Most of who have been counselors for a while know of instances where a former counselee has come back to say something like this: "Hey, remember me? You told me I wasn't too bright and I should not go to college. Well, I just got my Master's degree."

Now, I am going to violate an earlier precaution about oversimplification. I am going to suggest for your consideration that relevant to career choice, we can obser e certain types of attitudes toward work. If we, through counseling, can get a pretty sound picture of an individual counselee with a dominance of some of these attitudes, we may better help him explore his work and career goals. There are certain types of attitudes that emerge over the long range in our school counseling. I mention these now so that we might discuss them later.

Let me outline them briefly.* First, there are those students who appear to have a major lack of motivation. They manifest a negative attitude toward the work role. Here they are and this is their attitude. Why work? You work for somebody, and they get the money. Work is for "squares." Stealing is easier. These are attitudes and responses. But, then we meet with a more difficult type of person who is indifferent about work. I don't care, why do it? The general indifference to any kind of work role in society is a most difficult counseling situation. In this case, rather than confront the counselee with some kind of moralizing, I would suggest that we think of this person in his view of the work. Work, as he sees it, does not serve any vital needs of his personality. Here I suggest we can be a little more sensitive to the possibility that the counselee is more likely more concerned with immediate gratification than with the potential rewards of delayed gratification. Getting something now not tomorrow, is the attitude we are more likely to be concerned with.

There is a story about some Indians in the Southwest. A sawmill was built to give the Indians work. The Indians went to work and thought it was great. They were getting paid. They worked from five to ten days. The foreman came one morning and nobody came to work. What happened? Well, the Indians got enough money to do what they wanted to do and they didn't think it was worth coming to work anymore - until they needed more money.

The second attitude is represented by the student whose dominant response to a demand to be a productive work-member, whether it is a profession or job or whatever, is one of manifest fear and anxiety. Now, fear doesn't manifest itself like a sledgehammer, nor does anxiety. It is more subtle, especially when the counselee doesn't, understandably, want to reveal his fears. It will come indirectly to the surface. I counseled with a young man at the University of Wisconsin. He was the so-called "hippie" type, with the beard, long hair, dirty clothes, etc. He was involved in just about every protest that came along. We talked and then I lost track of him. About a year later he came in, a senior about to graduate. He sat down and said: "I want to talk about a "real" problem. I have to go to work and I am scared to death. I don't know what to do. I don't know how to go out into the world and work." Now, a year earlier, I wouldn't have thought he had any fear or anxiety about work. But, I suspect it was there all the time. He knew deep down the direction he had to go. So, in these cases, we may suspect the person very likely has in fact internalized - made his own - the demands of society. And it has been done in an intense way, whether through parents, teachers, or whoever. Unfortunately, such a person has also learned to believe he cannot meet the

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*Adapted from Walter Neff's Work and Human Behavior, Atherton Press. New York: 1968.

standards of a productive person. What we are working with as counselors is the perception and attitude of a person who without clearly describing it feels incapable, non-confident, perhaps even impotent: a poor and self-image. Work is a severe threat to his already inadequate self-esteem. He knows he has to do it, but he feels he can't do it. Thus, the fear and anxiety. The attitude is our concern, and not immediately job-selection.

The third typical attitude is one where the student is characterized by a predominant open hostility and aggressiveness. We have all met him or her. Open hostility and aggressiveness doesn't necessarily mean the person is on the verge of physical violence. Open hostility and aggression can come subtly in the form of passive resistance. This form of hostility can be a severe threat to the counselor - especially when the response to the counselor's best effort is a deadly shrug of the shoulders or a cryptic, "I don't know." The counselor says, warmly, "What do you want to do?" The response is, "I don't know." "Well, would you like to be a mailman?" "I don't care." That response really hurts us - our ego, that is. Here we sit, with our fund of wisdom and concern, and the student doesn't care. That may be counselee-hostility - but it is not toward us personally. Rarely, toward us personally. It might be helpful to know that these students most often can make career choices. It is important to note this in the case of hostility. Most likely these persons will get jobs. The problem by reason of their hostility will more than likely be - keeping a job. The student with this predominant characteristic or attitude will have to fit into an organization which the social process of give-and-take will be necessary. This student, long before he enters the world of work needs our help in learning how to cope with his feelings - how to find alternative ways of behaving other than hostility. For, his or her problem will probably be in maintaining a job. They will be, in probability, "trouble-maker," "unable to get along with others." So, when we have a suspicion, I am sure we do not come out and say, "Look, you're impossible - here's what's going to happen to you." We might be more effective if we assist the student to explore some of these feelings of hostility and aggression. What is it that keeps him from making friends and being sociable? We are dealing with an attitude first, and then career choice. We are dealing with the person not in terms of a task to be performed but in terms of himself as a human being who will be going to work.

The fourth attitude is noticed in students characterized by marked dependence. This is one we frequently meet. Having learned their reactions in a context perhaps of overly rigid, dominating parents or other adult figures, they tend to become overly compliant. "Yes ma'am, no ma'am. Yes, sir." If the counselor says, "Would you like to be a mailman. How do I go about being a mailman?" Overly compliant. This may be a tough situation for the counselor, especially because we, as counselors, do not want to act in authoritarian roles. But, for the student with this attitude, an authority's approval is a dominating motivation. You can expect he will react more for someone else's approval rather than for a personal value placed on what he is doing. Such students are now, and likely to be so in the world of work, highly dependent individuals. They tend to function adequately only under close supervision. Independent activity is a threatening demand, and serious difficulty may be expected when they are put into this type of situation. If you stop and think about the world of work, even though it is structured, even though it is supervised, there are still broad areas of operation in which one will have to command one's own actions.

In spite of the number of dependent students perhaps the most frequent attitute we, counselors, will recognize is in the student who displays a marked degree of naivetè. He is just ignorant. Not in any kind of value sense, he just doesn't know. There is little or no understanding on the part of the student about the world of work; no perception of himself as a productive worker. There is little or no knowledge of the demands of reality that he is going to be faced with in different work environments. For example, very few people go into the world of work today as an independent enterprise. The little independent grocery store is practically gone. We are more likely to work for large organizations. We function, like it or not, within organizational categories and definitions, and we have to learn to work under such conditions. This is not necessarily a bad thing, but the type of student under discussion at the moment is naive about it. So, here we are dealing with ignorance, not hostility, resistance, or indifference.

In this type of situation, with this kind of counselee, information-giving techniques are simply not enough. Values, attitudes, social esteem, economics, skills, kinds and length of preparation, sense of responsibility - all these variables are what we have to help the counselee learn. In such instances whenever we can provide vicarious or direct work experiences, we should help the counselee to use them in order to experience what it is doing to be like.

Perhaps, we have all heard before what I have been discussing, but perhaps we need to spell it out for ourselves. Each one of us can look into our own experience as counselors and probably recognize individuals predominantly characterized by one or more of these attitudes. Were we aware of the more fundamental human dynamics when that individual came to see us? Were we aware that the student was working out his needs; that hostility, aggression, indifference, dependence on attitudes with which the person was seeking to be somebody?

Our emphasis as counselors, it seems to me, in this whole business of career development, occupational choice - or whatever, is the individual person as he is here and now. When he walks in and sits down with us, a myriad of influences are working on him. But we have him here and now, and in a sense he is ours and we enter his world. This is our total responsibility at the moment. The records, the files, the principal fade into the background. It is this person and his life that matters. If that is not an ethical concern, I don't know what is. But, if we are going to say, "Just a minute, Louie, we will take care of you just as soon as we get these papers put away," or "Here are a couple of pamphlets, Louie, just shoot through them and find what you need," we have just failed as counselors. Ours is not task orientation in counseling about career development. It is not getting a job for someone. Any list of priorities in terms of work selection tells us as much. The University of Michigan in a recent study shows how consistently people list "money" rather low. Personal satisfaction, social relationships, self-esteem, recognition all rank high on what people are looking for in job selection. Research keeps pointing this out to us. It is up to us to be mindful of it. Work is more than a task. It is a personal enterprise to which the complex organism called a "person" brings all that he has.

Finally, just a few points we might consider for further discussion. What about our bright and very bright students? As counselors, one of the problems that we might discuss is their difficulty, somtimes, in making personal career decisions. They frequently, are ambivalent because they can do so many things well, and because they are often under rather intense parental pressure. Underneath all of this, I suspect there is a kind of attitude-value playing an influential role. That is, perseverance, consistency is a virtue. Young people ought to decide on a career, and having decided must stick to it - no matter how they feel. No wonder we encounter hesitation to make a career commitment. I think we need to help our students deal with the virtue of consistency and the virtue of change. How many jobs are changed in one's life? Perhaps, we can alleviate some of this kind of pressure on our young men and women through our counseling.

Our job is to help them explore and come to their own decisions and to live with the consequences of their choices. We are in the end working for the full autonomy of each of our counselees - his sense of free choice and decision. So, perhaps, our function is to facilitate self-exploration, flexible decisions, and general choices so that as the process of living goes on, the person, himself, can specify decisions and choices to his own satisfaction.

MECHANICAL ENGINEERING TECHNOLOGY

Roland E. White, Assistant Professor
Nashville State Technical Institute
Nashville, Tennessee

Welcome. I am glad to see so many counselors attending this seminar, and I am especially glad to have this opportunity to tell you what Nashville State Technical Institute has to offer the high school graduate. Of course, as you have already discovered, we offer a program which is compatible in every way feasible with the needs of the full-time student, working student, part-time student, veterans, community and business with special training sessions such as the one you are attending here this week.

One area of interest you might have is in knowing the type of student the Mechanical Engineering Technology program is geared to. Our program is geared to a large percent of students with average intelligence. It is geared to students with an intelligence and creative drive which exceeds that of the tradesman, but which is not really such as to guarantee success at a four-year college. This is not just intelligence I am referring to, but the basic nature of the student--how he thinks, what he feels to be important, or his goals in life. Most of these students are <u>not</u> theoretically oriented. Before they are willing to study something, they want to see some reason or practical use in doing so. They are not interested in learning just for the sake of learning. They are not highly motivated to read a text and to turn out a great deal of paper work; they prefer something tangible such as is found in our laboratory experiments.

Our program emphasizes an applied type approach as opposed to a primarily theoretical or textbook approach. We cover theory, but also go into the laboratory to actually see the applications of the theory and to get an idea of what is involved. This technique of teaching makes the information stick and greatly increases the student's understanding and interest. It is fairly common to see a student's face light up during lab with a sudden comment of "so that is how it works" or "I can see it now."

Our school offers a great deal in course content. We cover a high percentage of the four-year engineering curriculum in the number of areas of engineering studies. We do not go as deep into the theory as the four-year program does, but we do expose our students to more equipment, test procedures, and hardware than many do. As a result, our student can jump into setting up tests and using equipment with much more ease and familiarity than many engineering graduates. By the time our students graduate, they should be well aware of the equipment and hardware on the market, how to use it, and how to take data. We are able to do this in two years by omitting history and other nontechnical courses (which most of our students show little interest in anyway.) Of course, these courses do have their place in educational programs, but we just cannot crowd everything into two years. We are forced to be selective with our specific goals in mind.

We cover the basics during the first year. These include the following:

Math -- the most important engineering building block.

Physics -- a brief introduction to the topics to be covered in detail later.

English -- teaching students to express themselves in writing and verbally so they can communicate their ideas.

Economics, management, and human relations are also taught during the first year.

The second year is almost entirely engineering. Here they are introduced to the areas of drawing, static loads on bodies, dynamics of moving parts, strength of materials, manufacturing and production processes, hydraulics and pneumatics, heat transfer, metallurgy, and machine design.

All this ends in a senior research project in which each student gets an opportunity to apply what he has learned. There are twelve courses which have labs. This means there are approximately 130 lab experiments in Mechanical Engineering Technology alone. You can imagine the amount of equipment each student learns to use. In lab they study such things as heat treating of tool steel, strengths of different metals, bending of beams, velocity of moving parts, power transmission, heat exchangers, and control devices -- just to name a few.

The following may be indications of potential students: ability in math, inquisitive mind (Why does something work like it does?), willingness to stick with a job, interest in machinery, creative and analytical ability, preception of how things relate to something else and fit together, working on cars may be an indicator but not necessarily (They need more than just an interest in fixing something. They need the ability to attach a problem, figure out how to go about finding it and solving it).

Mechanical Engineering Technology is nothing like automotive repair only; it is much more comprehensive and demanding. It is a much broader field than this and requires a knowledge in many areas.

The next area of interest is what will be the Mechanical Engineering Technologist's bag? (i.e. What will he be doing?) His main function will be that of a technician. He will be running tests, not only pushing the buttons, but also figuring out what equipment to use to obtain the desired information. He will hook up the equipment, run the test, record the data, and in some cases analyze the data and come up with a conclusion.

The Mechanical Engineering Technologist may also be an engineering aid. An engineering aid helps with calculating, collecting or compiling information, running tests, etc. He may also be a machine

designer or be involved with sales. Machine designing would include trouble shooting and making modifications to equipment. When selling equipment, one needs to understand what the equipment will do and how it works. He also needs to be able to speak the language of the engineers to which he is trying to sell his equipment. The areas which he can enter are almost unlimited. The Mechanical Engineering Technician is the most widely needed. Where you have equipment and manufacturing plants, you will find a need for the mechanical technician.

The salary for a mechanical technician equals that of the other technicians--$600 per month.

Any questions?

PRETECHNICAL AND RELATED STUDIES

Daniel J. Reiber
Head of Pretechnical and Related Studies
Nashville State Technical Institute
Nashville, Tennessee

I would like to announce that this part of the program is brought to you by the Related Studies Division. My name is Dan Reiber and I am the Head of the Related Studies Division. In short, this is the academic division where we teach such courses as physics, math, English, accounting, and so forth. In the last few days you have seen what the different technology programs are all about, the types of equipment they have, the programs that are offered, probably the type of job that the student would go into after graduating. The purpose of the Related Studies Division is to prepare the student with the skills so he can succeed in his technologies program, and also to prepare him with the skills so that when he is out on a job he can do a good job. Just as in a junior college or even a four-year college, the Related Studies Division rounds out the student's education. In essence we are a two-year college--a two-year college that prepares a person to go directly into a job.

To illustrate the rounding out of the curriculum--each student takes one complete year of English, and each student takes a complete year of math. The Data Processing students take a complete year of accounting whereas, the Engineering Technology students take a complete year of physics. So if you compare our first year with the first year in a college, it is pretty similar. The point that I am trying to emphasize is that when you think of Nashville Tech, think of us actually as a two-year college. So if Johnny's father says Johnny has got to go to college, do not forget Nashville Tech--we fit that category. We teach college-level work. Incidently, we are very proud of the fact that in Related Studies over twenty percent of our instructors have a Ph.D. This is surprising to us probably as well as it is surprising to you. The instructors in the Related Studies Division are a pretty sharp group of people.

Another question you might have is what kind of student will succeed at Nashville Tech. We have had a year of operation and we are beginning to see what items are good predictors of a student's success. I think a score of 16 or so on the ACT is about the minimum for a good indicator of success. Not that students with a lower score will not succeed, but the chances of succeeding are not very good. A student should have at least one year of math. Now if he has only one year of math he is in a marginal situation. If he had a good one year of math, his chances might be fair. He will get a lot of math here and we move reasonably fast. I would recommend to your students that they have at least two years; four years would not hurt. Also as with college, the student that

has the intestinal fortitude to grind out a heavy class in physics or math is the kind of student that we find will succeed here. I am not trying to give the impression that we are a very difficult school, but by the same token we are not a very easy school either. Students that are willing to try and try hard will generally succeed. They should have a reasonably amount of smarts to begin with.

For students that come here academically disadvantaged, we have some programs where we are trying to give them as much help as we can. Before a student starts any of his classes, we give the student a complete battery of diagnostic tests. Just to show that we have them I am holding them up. One is in reading, one is in English, and one is in mathematics. The purpose of these tests is not to decide whether or not he comes here, but to indicate in which areas he heeds help. For each area in the test that the student appears weak, we have appropriate materials that help him in the regular classwork and outside of his regular classwork. So we are trying to diagnose the particular areas in which a student has weaknesses and do something about it. For some students who really need a lot of help we have special pretechnical courses. These are not for credit. They are at a level somewhere between high school and college, and their chief purpose is to bring students up to a level where they can begin college level work. We have pretech courses in reading, English, mathematics, and physics. So if you have a student who is fairly weak and it is questionable as to whether he could succeed here; send him out. We probably do more to help the weak student than any other four year or two year college in Tennessee. We are certainly competitive in that respect. We are trying very hard. One program that we are undertaking, also, is to use a computer to help the students learn. Apparently there is a very good interaction between a computer helping a student and a student responding to a computer. Studies have shown, particularly for the disadvantaged student, that the computer interface with the student is a very good one for getting him to overcome certain deficiencies.

Well, I have talked enough about summarizing the Related Studies Divison. The next speakers on the show are all from the division. They will tell you about their specific areas. One last thing that I also want you to note is that all the Related Studies courses try to stress relevance to the particular Technology. We don't teach physics just because we have to teach physics. We try to relate physics to the particular technology that the students are taking. The same in English, the same in reading, the same in all the courses. The frosting on the cake is one which shows relevance to the particular technologies. With that in mind, the first speaker is Mrs. Wares who is in charge of our reading program. She has a very short film for you that she will tell you about.

REMEDIAL READING

Mrs. Margaret Wares
Remedial Reading Specialist
Nashville State Technical Institute
Nashville, Tennessee

Good morning. While I was trying to get the projector threaded and set up, I missed hearing the introduction, and I do not know if Dan told you my name. I am Margaret Wares, and I am a Remedial Reading Specialist here at Nashville Tech. We have prepared a seven-minute film, "Modern Approach to Reading," that I think will explain to you as quickly as possible what the purpose, the idea--the whole idea of the reading program is. I would like for you to watch the film and then when you finish, I will answer any questions that you have. Thank you very much. (At this point, "Modern Approach to Reading" was presented.)

From watching the film, I do hope that you got some idea of the unique approach that we have in helping the student overcome his reading disability. We treat each student as an individual. We teach classes of one whether there are twenty-five students in the class or whether there are seventy. By using the computer, we manage to teach our students on an one-to-one basis. At no time in our reading laboratory are there two students doing the same thing at the same time. We are only able to accomplish this because the computer matches students with materials--not just comprehension materials but also his phonetic disabilities. The student does not understand, for example, division of words. We have a phonics series here that is almost completed, and the computer can tell us "this student needs help in this area" and we teach him and work with him.

It is not necessary for this type of program to have a computer. To handle the volume of students we do, yes, it was necessary to use the computer. But under ordinary circumstances, in ordinary situations, individualization can be accomplished by a classroom teacher.

PRETECHNICAL AND REMEDIAL ENGLISH

Miss Martha Henegar
Head, Public Relations
Nashville State Technical Institute
Nashville, Tennessee

We're not training people for a job. We're training people to move up, or across. They must be able to communicate--to talk to supervisors and managers and to craftsmen. We impress people as we speak, not just with our voices, but all of ourselves.

Speech training is being revolutionized today:

1. Told the student how he sounds and looks.
2. Student could hear how he sounds, but we still had to tell him how he looks.
3. Now: He can hear and see for himself!

We use VTR (Videotape Recording) in speech so the student can be his own critic. He sees what he is doing right and what he is doing wrong. To illustrate how it works, I'll ask Mr. Poole to tape while I give a "little speech".

One career possibility for trained technicians is that of technical writer--writing technical reports, writing articles for industrial house organs, writing ads for company products, writing reports to stockholders, writing for the company newsletter or magazine, writing speeches for the boss to make at the Lion's Club. Not all of our graduates will become technical writers though most will at least write technical reports. A technical writer must have not only technical knowledge but the ability to write as well.

At Nashville Tech students who do have the ability and the desire to write have the opportunity to do so for our "house organ", a monthly magazine called Print-Out. This is Print-Out. We'll be giving you copies to take with you as you end this seminar tomorrow. (O.K., Mr. Poole, if you'll rewind that.)

Most Print-Out articles are written by students. Virtually all of the pix are made and processed by students. This is true too for the Institute yearbook called the Lay-Out. Students take the pictures and write the copy. After the layout for these publications is made showing where copy and pix go, our composing room varitypes the copy and makes a finished layout. This is photographed and a plate is made which is put on the offset press. After copies are run they are trimmed, collated, folded and stapled, all automatically. This whole process is done in our print shop which also prints the bulletin, test materials, brochures, business forms and other printing needs. The whole process is explained in the February issue which you will receive.

Now, back to speech class. The other day in the library, two of you became instant TV stars by staging a counseling interview. Did you notice that everyone watched the playback as attentively, if not more so, than the live performance? This happens in speech class too. No one seems to get bored by hearing each speech twice.

PRETECHNICAL AND REMEDIAL ENGLISH

Arthur J. Poole
Assistant Professor
Nashville State Technical Institute
Nashville, Tennessee

Good morning, I'm Mr. Poole; I'm also with the English Department. I would like to give you a brief review of our English composition courses which include Report Writing. Our basic composition course is EN-114. In this course we emphasize basic skills of rhetoric and usage. It is not a grammar course per se; rather we strive for three objectives: clarity of written expression, acceptable style and usage, and logical organization of material.

The English composition course is actually divided into three courses. We have a basic non-credit course, EN-10, which does deal with grammar. It's a very basic course and deals with such things as subject-verb agreement, pronoun reference, misplaced modifiers and other fundamental principles. It is designed to provide a complete review for the marginal or the submarginal student. However, by the time the student reaches EN-114, we expect him to have the very basic skills under control. That is, he ought to know that a singular subject takes a singular verb; he ought to know the difference between an object and a predicate. In the regular composition course, therefore, we emphasize the principles of rhetoric and style in writing. This is a difficult thing to teach, as any writer would admit. There's no one way to teach writing. But NSTI is a technical school and, therefore, we are interested in certain principles that would apply more to technical writing than to other areas of creative writing.

At this point, one might ask what are some of these properties of technical writing? Clarity, control, dignity, authority, veracity, ethicality, and objectivity are some of the more important characteristics. Objectivity is an especially important virtue that is emphasized in Report Writing. We have five areas of technology and in each of these areas students are required to prepare laboratory reports, case studies, various reports, and term reports dealing with their specific fields. We feel that all their technical knowledge is of no use unless it can be communicated to their peers, to their superiors, and even to their subordinates. So in report writing we try to teach the students to be objective. In fact, we try to define a report and in this regard reports must adhere to at least two rules. First of all, they must be capable of verification. That is, they must deal with facts, data, information that is collected accurately. Second, they ought to exclude, as far as possible, inferences and judgments.

An inference, we try to let the student know, is a statement about the unknown made on the basis of the known. Often times, students will fall into this pitfall. They will make assumptions based on things they see without really knowing the underlying cause. There is really no place for inferences in technical writing. Teaching students to avoid inferences is one means of teaching objectivity to students.

Technical writing also involves qualified judgments on the part of the writer. Judgments also involve opinions, but generally judgments are qualified. That is, the evidence is such that it will support the final opinion or conclusion. And so, we define a judgment as all expressions of the writer's approval or disapproval of the occurrences, persons, or objects he is describing. Scientific verifiability rests upon the external observation of facts, not upon the mere heaping up of judgments, as you will see when Mr. McDow demonstrates his equipment. One has to tabulate the data accurately. You don't make a judgment, a claim, without the support of some type of verifiable data.

I have a sample student report which will illustrate the format of a typical report; and, interestingly enough, the report is entitled "Where To Go--A Comparative Study of Data Processing Schools in the Nashville Area." This report was prepared by one of Miss Henegar's students. It begins with a letter of transmittal. The letter of transmittal is an effective introductory element to a report. It states the authorization for the report and the title, defines the problem, and also contains a brief summary of how the person will tackle the problem and it concludes with the recommendations of the writer. It serves as a cover for the report after the title sheet. The Table of Contents is often the next item in a formal report. Of course, with a technical report one may also have an approval sheet and a distribution sheet indicating to whom the report goes. The body of most technical reports begins with some introductory summary or abstract which essentially summarizes the key points of the report. The report is appropriately broken down into various areas dealing with the various programs of study, the location of the various schools, the evening classes, credit considerations, degree programs, etc. Now any information that would detract from the body of the report (that is, interrupt the continuity of the report) should be placed in the appendix or addendum of the report. Students learn to organize such material that would not belong in the body since the reader might want to refer to it. Here we have such things as charts, tables, breakdowns, statistics, graphs, and even drawings. This is a typical report which represents the results of a quarter's work. It is prepared as a final project and it often counts good part of the student's grade. In my class it counts one-third of the student's grade.

PHYSICS DEPARTMENT

Dr. Robert S. McDow
Associate Professor
Nashville State Technical Institute
Nashville, Tennessee

Good morning. I feel a little out of place up here behind this microphone, and I am not going to talk behind it very long. Mr. Rubin and I want to demonstrate to you some of the mathematics and physics that the students encounter in their first year at NSTI in a technology program. So I am not going to be doing much talking, I am going to be doing more working with the apparatus up here.

In physics I am sure that you have often heard the phrase "in the absence of friction," or "if it were not for friction, this would happen." To demonstrate experiments in the absence of friction, the Ealing Company has developed an air track, not to eliminate friction, but to get it down to where it is so small that we don't have to pay attention to it. This air track works by blowing in air through the end, and the air comes down the long triangular extrusion and comes out some very small holes that you probably can't see. This continual rushing of air coming out will allow these solid metal or aluminum gliders to sit on a film of air. Once they are sitting on a film of air, you can give them a shove and they will continue to go at a very constant velocity. They only lose about half of their velocity in maybe forty or fifty seconds. I am going to turn it on in just a moment, but first I want to get you oriented to what I am going to do.

It is nice to know the velocity of the cars as they go along the track because then we can calculate momentum, energy and make our experimental determinations in a quantitative manner. To determine the velocity you need to know how far the thing went and you need to know how long it took. You always divide how far it went by how long it took. So let's take a car, say a half a foot long, that is 0.5 feet and 6 inches. I can allow this car to stop a beam of light as it goes through the photocell gate and allow this photocell gate run a clock which I know you cannot see the hands of. If it runs a clock for every second or millisecond, every thousandth of a second really, if it runs this clock while this six inches is going through this gate, you can calculate the velocity of this car. I am going to do that in just a moment and we are going to predict the velocity with the track tilted at a small angle. Mr. Rubin is going to do most of the predicting; I am going to stand up here and try to get it to come to our right. Let me now turn this thing on and show you how it works. The blower is in the back because it makes a lot of noise. It is just a vacuum cleaner back here running in reverse.

I have managed to get the track fairly level and the glider will not take off one way or the other very fast. It does not take very much to make this thing move, and by giving it a shove it will continue

to go for quite some time. Let me see if I can get that clock running--you plug it in and turn it on. It is not working now because I set this up in a special way. You can see it is pretty friction free, it is still going. The students in the laboratory do this experiment, but they use a somewhat smaller track, but they all do their own. I am going to demonstrate very briefly one of the experiments they do.

It turns out that if you look at the law of conservation of energy and the conservation of momentum and you go through about six pages of equations, you will find that for any elastical collision, that's a bouncy collision like these springs, that the approach velocity of two objects will equal the separation velocity. If these two cars are coming together at let us say 4 feet per second, when they bounce they are going to be going 4 feet per second with respect to each other. It also means that if a car is going along like this and another car is catching it at say 2 feet per second that when they bounce apart it will be 2 feet per second that they separate at. Let's watch and see if this works. Let's take one car sitting still and a car of equal mass coming in and hitting it. There is the approach and there is the separation velocity. Those are equal. I can't demonstrate it to you quantatively because, well, I know it takes the students a couple of hours to do it, and I'm sure it would take me probably two and a half hours. The first velocity does equal the separation velocity. I'll do it kind of slow and I'll wave my hands to see if it comes out right. Here's the approach and there's the separation. Notice that this car is continuing to move and this one is going very fast. But that separation velocity is equal to that approach velocity. Now it works the same way if the Volkswagon hits the Cadillac, the same sort of thing except the Volkswagon bounces off and goes backward.

Now I want to do a real experiment. This is one I hope to be able to do in about two minutes because I know you are getting ready to take a break. And this is an experiment that the students do in the laboratory. What I am going to do is tilt this track. I've got some little blocks here. Each one is a half-inch thick. I'm going to tilt the track and I'm going to let the car go from up here and it's going to go down hill this way. And you know the further it goes the faster it's going when it gets there. We are going to predict mathematically how fast it's going when it gets there. It's going to go six feet. The angle of tilt is going to be very small. Mr. Rubin will mention this, 5 milliradians, or something like that. And it is going to go through this clock. Now let me just demonstrate this clock very briefly. Some of you will be able to see that hand. Anytime that this car is in that gate, that clock is running. Now it took the car .728 seconds to go through the gate. If I divided by half a foot by .728 seconds I would get the velocity in feet per second.

This is a vector diagram of the problem I am going to do, or the experiment that I am going to do. Here's the tilted track. This line represents the line of the track. This angle, theta, which we will be measuring in radius will be very small. A half an inch on that nine

foot track is not going to be a very big angle. Now when that track is tilted like that and that car is sitting on that track we all know that the force of gravity pulls it straight towards the earth. The force of gravity always acts straight down. Well we can resolve this vector force, this is the force due to gravity and is equal to mass times acceleration due to gravity. This force can be resolved into two components. One component is a little bitty short arrow or vector which tends to move the car down the track. It's not a very big force because the track is not tilted very much. The other component is one which is not shown on the diagram but it is perpendicular to the track. It tends to keep the car stuck to the track. We're not going to worry about that one because we've gone to a lot of trouble to keep the car riding on a film of air and we're not going to worry about that force. But there is a little force that tends to accelerate the car. Now Mr. Rubin will take over from here and show you the algebra that students have to go through.

Using the overhead projector and with the aid of a vector diagram and equations, Mr. Rubin explained the mathematics that was involved with predicting the velocity of the glider at the end of its trip down the track. He predicted that the final velocity with one block under one end of the track would be 1.46 feet per second. With four blocks under the track the glider should be going twice that fast or 2.92 feet per second. The experiment was performed and the results obtained were within 10 percent of the predicted values.

INTRODUCTION

Jack L. Sandlin, Superintendent
State Area Vocational-Technical School
Nashville, Tennessee

We are honored and glad to have you people over with us for a while today as well as tomorrow. I have limited the group that is going to be talking with you today to five minutes each, and I know that is difficult when you start talking about "Vocational Education", you don't stop in five minutes. To keep me from getting stopped, I had just better not even start. We are pressed for time and the schedule is tight, but I do sincerely hope that when the week is over you will find somewhere in your schedule whether this summer or this fall, at your convenience of course, a day and will say, "I want to go back out to the Area Vocational-Technical School to see what I can see. You might be surprised!"

We have so many absences with staff members off on in-service schedules, and things of this nature, that it is really rather quiet around here. We would like for you to know who is gone. We do have a "filler-in" and you won't miss a single shop or department. You will miss, however, seeing some student activity which is, I think, something wonderful to see.

This week, in Chattanooga, there is an in-service for machine shop instructors, tool and die instructors, and drafting instructors. (We have two machine shop instructors, one tool and die instructor, and one drafting instructor gone.) Also there is a special clinic being conducted for automotive air conditioning. You know, if your automobile air conditioner doesn't work properly you get awfully unhappy. The people that service them go to factory schools for upgrading; they learn the latest, down to the smallest detail of things. Our refrigeration and air conditioning, auto mechanic, and auto body and fender repair instructors are in this special clinic today and tomorrow. Their classes are, however, operating and capable people are in charge of the departments. Our two RNs, as lots of you know, Mrs. Joan Toney and Mrs. Frances Maines, were absent yesterday and most of today. Some of you know of Mrs. Dycas, who was president of the AVA. She passed away night before last with terminal cancer and was buried yesterday. Mrs. Toney was vice-president elect but she is president now. Mrs. Maines is vice-president of the Middle Tennessee Health Group and she is also there. Their classes, the nurses' classes, are in operation. That makes about nine of our staff among the missing around here.

This morning, for a short time, we are going to visit six departments: Cosmotology, Drafting, Child Care, Unit Record, Learning Center, and Watch Making. Drafting will be explained by Mr. Randy Dayhuff who is the Related Instructor. From there we will go into the Child Care Department with Mrs. Ezell. The Child Care Department is the only program of this type in the State. Here adults are being trained for

employment as instructors, assistant instructors, and employees for pre-school day care centers. Quite an exciting program. Mrs. Ezell will tell you what is happening in her present class.

We will skip the CLA class, Certified Laboratory Assistants, which is on your list, because they are on a field trip today. We will visit the Unit Record Equipment instead. Also, we will go into Mrs. Brandt's Department, the Learning Center, one of the more exciting classes. (It is a department that I will let her describe.) There are 57 students in the Learning Lab today.

Most of you know Mr. Bob Tolbert sitting at the end of the table, and Mr. Lee Rotenberry, who was with us the other day. When we finish here, Mr. Tolbert and I will divide you into two groups. With this, I'm going to hush and start with the lady on the end and work our way down. They wouldn't come up front, but I'm going to introduce them anyway. Mrs. Brandt is in charge of our Learning Center.

LEARNING CENTER

Mrs. Alberta Brandt
State Area Vocational-Technical School
Nashville, Tennessee

I am Alberta Brandt, and I am a colleague of yours. I taught for a "few" years in the Metro Schools. I won't tell you how many, but I have retired anyway. Upon retiring, I decided that I needed something real exciting to do. This is one of the most exciting things that I have done in my life, the job that I have here. It is most rewarding and it is fun. We have our moments, our ups and downs, but we think that we are on the right track now. What I do is to try to motivate and evaluate students' progress. We don't call ourselves "Remedial Lab" because the first time we had "remedial" put in somebody said that is an "idiot room." Well, you know how that goes, so we don't call ourselves that. Something you haven't learned is not remedial. I teach things that people have never learned. We teach basic learnings: Basic reading which starts with about the third grade level and goes through high school; basic spelling, phonics, arithmetic--how to add, multiply, subtract, and divide--and basic communications on how to talk, and good English which they should have learned somewhere down the line and didn't, or were never exposed to it.

I want to welcome you to our school. We are proud of it. We think we are doing a creditable job. Not everyone, as you know, is college material. Let's face it, we have a place right here for those people who do not need to go to college. We want you to encourage these boys and girls to enroll in our school or come out and give us a try anyway.

COSMOTOLOGY

Mrs. Ernestine Morse
State Area Vocational-Technical School
Nashville, Tennessee

We are certainly happy to have you visit with us this morning. I'm Ernestine Morse, Cosmotology Instructor, and I would like to tell you about our class. You must be 17 years of age, have had two years of high school or its equivalent, to enter our class. First, the would be student fills out an application with our school, is interviewed and tested, and placed on our waiting list. Sometimes it takes two to four months to be enrolled.

After enrollment, an application is submitted to the State Board for Student license. This costs $4. We have a training period of 1,500 hours. (They must have had 300 hours before they actually work on the patron.) We train them to manicure and they practice with each other, and after they have had 300 hours they can work on patrons. As Mr. Sandlin told you, the State employees, the students, friends, and mothers visit us, and the orphans who live nearby come during the summer. Sister Susan said that they would talk all week about coming in.

A bit about myself: I've been with Cosmotology 12 years. I've been teaching four years, and I have started my third year with the Area Vocational School. I have graduated 17 students in the little over two years that I have been here. They have all passed the State Board. I have two going this Monday. There are over 600 all over the State of Tennessee to take the State Board this month. We have two days for the State Board--Monday and Tuesday. We are really glad to have you. When you come into the classrooms, I would like to answer any question that you have. If we can help you, call me for an appointment any Monday or Tuesday, Wednesday, or Thursday. We would be happy to serve you.

UNIT RECORD DEPARTMENT

Mrs. Pam Reece
State Area Vocational-Technical School
Nashville, Tennessee

We are happy to have you here today. I am an instructor in Data Processing, and I have been in the field for a few years. The requirements for students entering is that they be 17 years of age and pass a GATB test. Right now I have two programs. The first is a six to eight week keypunch course. The student learns the keypunch machine and how to verify. They get a certificate when they complete the course for a keypunch operator. The next course they can complete, some of them do and some of them don't, is to learn the three other machines we have. They are the Sorter, 502 Reproducer, and the 402 Accounting machine. This together with the keypunch completes the six months course. Most of the students that I have had have only taken the keypunch because they can get a job quickly. The best ages are from 18 to 25. I find that they are the easiest to place, that is with a high school diploma. However, I have placed students without a high school diploma, but it is much easier if they do have it. It does help them to know typewriting, but I have had students who have never had typewriting before so really that doesn't make too much difference. The salary range for a keypunch operator is anywhere from $300 to $375 a month. The machine operator, the one who takes the full course, makes anywhere from $325 to $400 a month starting. In job placement, out of the students I have had for over a two year period, I have placed about 85 percent.

CHILD DEVELOPMENT PROGRAM

Mrs. Suzanne Ezell
State Area Vocational-Technical School
Nashville, Tennessee

Eighty percent of the child's intellectual growth takes place by the time he is eight years old. By the time you folks get them and with what you have had to deal with, there is not too much hope of upgrading some of them. That is the reason we feel that only the best trained and best qualified people should work with pre-school children. That is the reason we are here to train people to be better prepared pre-school workers. The graduates from this program are employed as assistant teachers or aides in day care programs or in kindergartens. We have also placed people in private homes in governess type positions; we have people working with people in hospitals and psychiatric centers with emotionally disturbed children and with handicapped children. We have placed people with government agencies that work with welfare children by going into homes and teaching mothers how to take care of their own children, plus the field is open with any number of jobs available for girls who are interested in working in this area. Our curriculum consists of written assignments covering basically these areas; we think it is important to know how a child grows and why he grows the way he does, the pattern of growth, how to guide children, and how to discipline children, the idea that children wander at play that if you sit children down with a pile of blocks and let them play all morning, and the health and safety of a child.

In addition to using movies, filmstrips, tape recorders, cassetts, learning practical theory, we also have laboratory experiences in art, music, science, math and literature for pre-school children. This is where we experiment back in our room with some of the things that children ought to be doing and can be doing. Then the students who are advanced and who have finished a lot of this work go into day care centers three days a week, Tuesday, Wednesday, and Thursday, and actually get practical experience working with the children. Today, when you visit my classroom you will see that there are only two students here. The reason for this is that the rest of the students are out working in day care centers. One of these students is new and is not quite ready to go into the centers yet. One of them is just getting ready to graduate and is back in class finishing some last minute assignments that she had to do in order to graduate. The salaries have traditionally been very low in this field which is very upsetting to us, but they are rising as the boom of child care is beginning to take effect in Nashville. Nashville is a little behind in this. A lot of the other Metro areas are much-in for their child care services boom, and Nashville is coming into this with more every day.

WATCHMAKING

Dean Jenne
State Area Vocational-Technical School
Nashville, Tennessee

I am Dean Jenne, Instructor of Watchmaking. My experience, as far as watchmaking is: I was manager of a jewelry store before going back into the service. I managed Sears Roebuck watch repair here in Nashville. I opened the William Bracker Jewelry Store on White Bridge Road before going into business for myself, and then Mr. Sandlin hired me for out here. I have had a broad field as far as managing and operating my own business. I have had 20 odd years as a watchmaker.

The course here is set up for 18 months. It is set up in such a way that when you finish one step you go to the next step. Some people can do it if they are mechanically minded, or have had a lot of mechanical work. Some people have done it in one year. Others are slow and may take them more than a year. They can finish it as fast as they want or as slow as they want. The main thing is to teach them to do it and do it right. As far as the training part in watchmaking sometimes it is a little more difficult than most vocations to teach. Before you can actually teach them watchmaking or even work on a watch, you have to teach them to use small tools and to work under a magnifying glass. The hardest part is the working under a magnifying glass. For some people, it may take a month or two months or even three months before they can actually start to work on a watch. Next, they start working on time measuring devices. That is all a watch is. Working on clocks are easier because they are larger and easier to understand and to see. From that they are taught to work on parts of a watch, such as putting a hand on, jewels in, main springs in, and straightening the hair spring. After this, you actually start working on the watch. From there on out, the students repair watches all the time. We don't have any trouble getting watches here. They are always behind. The students and the State Office keep us well supplied with watches and clocks. They repair parts for the rest of the course and go back to reviewing all the other parts they have learned. A lot of schools are set up for doing all "dummy work" on old beat up watches. You can't learn too much on that for there is no interest, whereas most of the work done here is on customer watches just like in the jewelry store. They know that they have to get it right because somebody is going to depend on them. In a jewelry store, you don't have any comebacks. You take the watch and work on it or else. A certain percent of comeback is understandable. If you go over that percent, you are in trouble, and if you go under that percent, you are in trouble. As far as the requirements in the course, the student has to be 17 years of age or older. There is no education limit on it. They have to be able to read well enough to understand their textbooks. The next part is the test which is eye-hand coordination, finger

dexterity and the depth of feel. When we started eight years ago, we let anybody in that wanted to come in and try it. We have found that with the lower scores it is practically impossible to become a watchmaker. The main thing you have to have is the desire. If they don't have the desire, but have the mechanical ability it is pretty hard because the work is so close and so tedious that you have to like it. If you don't like watch repair and stay in this field, the largest part of them wind up in a sanitarium or become an alcoholic. It is just too much of a strain. It is a field that if you like it, you will really enjoy working in it. It is rewarding and there is a challenge every day because no two watches have the same problem. Again, I say you must have the desire to work with it. When you come through the class, if you have any questions, I'll try to answer them.

DRAFTING

Randy Dayhuff
State Area Vocational-Technical School
Nashville, Tennessee

I am Randy Dayhuff. I am the Industrial Theory Instructor. I came here with a broad background not very deep in any field but rather wide in machine, mechanical engineering, mathematics (certified to teach math, grades 1-12), and I have been a "maverick". I have been in a lot of departments. I was in automotive body and fender this morning before you arrived. The instructor in that department was teaching a class.

Our Drafting Department is what I want to tell you about. We have two classes in drafting, a full-time day class and a part-time night class which meets four hours a night, four nights a week. We have a great demand for draftsmen. Right now, we don't have anyone within a year of graduating. They are hiring them before they graduate. I understand that we have had a call lately for more than we have in classes and we only have 20 in a class. The demands sent to us for graduates is great. We have, basically, five areas of drafting. We try to prepare them for engineers, in mechanical, architectural, electrical and geographic map making. I work with this class two mornings a week for about an hour and one-half. Most of what I teach is mathematics, and math, as you know, is used in most all fields.

I'll be in the Drafting Department when you come by. I don't know if I can answer all of your questions, but I will try. Feel free to ask me any you may have. Tomorrow, I will be in the machine shop in the Tool and Die class. I am basically familiar with both of these.

INTRODUCTION

Jack L. Sandlin, Superintendent
State Area Vocational-Technical School
Nashville, Tennessee

We are glad to have you back this morning. We have another group of our staff to give you a thumbnail sketch of the departments that they represent and the things they do. They are: Mr. Smith Robertson in Bookkeeping; Mrs. Bess Wright in Secretarial, and Mrs. Forrest Ann Clements in Clerical and who heads up the Office Occupations Department; Miss Carol Smith, Certified Laboratory Assistant; Mr. Walker Hood, Basic Electricity Electronics; and Mr. Wallace Hull is our "Welder"; Mr. Bob Tolbert, Assistant Superintendent, and he will be one of the tour guides; Mrs. Joan Toney, our Health Department's RN, is back with us today; Mr. Gordon Harless, Office Machine Repair. We have no formality in this. We will start with Mrs. Clements from the Office Occupations Department.

OFFICE OCCUPATIONAL DEPARTMENT

Mrs. Forrest Ann Clements
State Area Vocational-Technical School
Nashville, Tennessee

I am Mrs. Forrest Ann Clements, Head of the Office Occupational Department. First, before we start, I would like to pass out these listings of the courses that we teach in our area. There are three of us in Office Occupations. There is Mr. Smith Robertson who teaches the Bookkeeping Section. However, we do have an intergrated program whereby each of us teach most of the students one particular subject or more. Next to him is Mrs. Wright, who teaches our Secretarial Section and I teach the Clerical. Mr. Robertson has many years of experience in his field and in various duties. He has been with the program here since it was out at Hume-Fogg in 1964. Mrs. Wright has been with the program starting at Hume-Fogg in 1965. I am only a late comer. Both of these people are very well qualified, very good, and have a very good program. I have been here since September of last year. I am one of those who interrupts a college career to go to work. I worked for nine years then I went back as an "old mama" and got a degree last year. So I am one of those who proves that it can be done if you want to.

We are all firm believers in vocational education. We feel there is a place for everyone. During the last year we have had in these areas a total of 145 people enrolled. They have stayed for various lengths of time and we have tried to prepare them for work. Now, we have 55 currently enrolled, which means we have had 90 people that have passed through our areas that are not with us right now. Over sixty-six percent or two-thirds of those are working in jobs that we have trained them for. Again, this may not seem a very high percentage to you but yet with the many qualifications and with all the competition that we have in the Metro area where the jobs are available, we feel that this is a fairly successful percentage. We have about 20 positions that we train our people for. A secretary covers a multitude of sins. She can be anything from a very high level "executive secretary" on down to a "file clerk". We do, however, classify the different positions and the pay is classified according to the training. We have various steps. That is, if a girl or boy comes in and cannot stay to complete the course, the part which they do complete entitles them to a DOT title which the State gives and thus they are qualified to do some phase of work. Not everyone can be an executive and not everyone can be a bookkeeper. There are, however, various jobs and various setups in each organization. We try to train the people that are needed to meet the needs of the community.

We will be glad to go over everything with you when you come to our department and answer any questions you might have.

CERTIFIED LABORATORY ASSISTANT

Miss Carol Smith
State Area Vocational-Technical School
Nashville, Tennessee

I'm Carol Smith, Certified Laboratory Assistant Instructor. Those of us who work in the medical laboratory love to do some bragging and I always enjoy talking about it. The reason we enjoy talking about it so much is that on all the doctors and nurses shows we see we get excited but never get to express what a big roll we play in medicine. Here, we have the opportunity.

The laboratory itself is a complex structure unlike any other department in the hospital. I have worked primarily in the hospital. There are a few people who work in State doctors' offices. The laboratory is structured under a pathologist who is an MD with five years of residency. This is a lot of education. Working under a medical technologist as a medical technician and working after that as a CLA, we are training the bottom level of laboratory workers in our program. The difference in all of these levels is primarily education. The medical technologist has a Bachelor of Arts or better degree, plus a year's training. The medical laboratory technician has an Associate Degree or a junior college degree, plus a year's training. The CLA has only one year's training. The duties of these various levels of training vary from hospital to hospital but are aligned according to degrees of difficulty.

Most people just don't know what goes on in a laboratory. For example, you may not be aware that the average size hospital is around 300 beds and you give around 500,000 tests in a year and anywhere from 20,000 to 30,000 in a month. This is a lot of work. The range of tests which can be given in a laboratory is around 350. Under different departments you may be working with chemistry, bacteriology, urinalysis, parisitology, blood banking, and other special departments. So you can see that it is a complicated field to a certain extent.

I am a medical technologist and I do have a degree. I have received the training program that goes with the medical technology. I do have four or five years experience and I am older than I look. The CLA is doing the routine procedures in the laboratory. That doesn't mean that they are not complicated. They are just routine, done the same way all the time. They have been taught to do laboratory procedures, how to pipet, etc., the very simple work all the way up to computerized equipment. The computer does all the things automatically and has lights flashing and it is exciting. We have enjoyed electronic equipment. However, all of the duties will have a wide range, complicated and sophisticated as they are. They will not be required to actually develop new tests or to do research or to supervise. Most everyone is acquainted with the laboratory when they come to take their tests in the hospital. This is probably the simplest thing that we do and almost the only contact we have with the patient.

Our CLA class has several things that are required. They are required to have a high school diploma and a year's training. When they are finished with a year's training, they have several qualifying examinations they must take. There are two in Tennessee. They are required to pass a State examination given by the Tennessee Department of Public Health. They are also required to pass a registered examination given by the Accrediting Society which is operated by pathologists. As stated, they must pass these two examinations before they will be allowed to work in a laboratory. So they must have a certificate from a certified school, pass a State examination, and pass a national examination. Since you are counselors I might mention the pay level at the present time in Nashville starts around $450 a month. If they want to go on into other areas their salary may be higher. For example, the medical technologist starts around $650 a month. The in-between level, the MLT, Medical Laboratory Technician, starts around $550. This gives us an idea of what the earning power will be.

When I go to look at a prospective CLA student, there are several things that I look for that are important attributes. First of all, they need to be at least semi-academic oriented. In other words, it won't do for a person who is not doing fairly well in his academic studies. We estimate that we will increase the student's vocabulary by a minimum of 10,000 words in one year. The student who thinks that he will just be wearing a white coat and looking important that is just not what it takes. It takes being interested in medicine and being willing to study. We make them study. They will need about $50 for books and supplies when they start.

Another thing that helps us is that they have done volunteer work in the hospital. By doing the volunteer work it gives the student an idea what they are in for and will give them a chance to look in before they actually go into something. The actual requirement is that they be between the ages of 17 and 55. We do, however, have older people in the program, and they work out marvelously. Also they must have a high school diploma and pass the GATB test and be physically fit.

NURSING

Mrs. Joan Toney
State Area Vocational-Technical School
Nashville, Tennessee

I'm Joan Toney and I'm only half of the nursing team which teaches the nurses Assistant Program here. The other half is Mrs. Frances Maines. She is at Donelson Hospital this morning with some of our students. These students have reached their clinical phase.

I'm a graduate of St. Thomas School of Nursing, and I attended Nazareth College in Louisville, Kentucky. I've been in the business 19 years; in fact, many more years than I like to admit. I've been in Vocational-Technical Education for six years. Prior to this, I was Head Nurse at St. Thomas Hospital in the maternity ward. If any of you have been in the hospital in recent years, you will have noticed that all the bedside nursing care is taught by non-professionals or semi-professional people. This is the name of our game. We teach the Nursing Assistants to help or assist the professional nurse and the LPN nurse. Our class is approximately three to four months in length.

Mrs. Maines and I feel (and I don't know what the administration is going to say about this) like we have a real unique program in that we're the only class in Health Occupations in the State of Tennessee that takes in students whenever there's an opening. Nearly every Monday we get new students. We can take 28 students. We have 26 presently enrolled in our class. Of those 26 students, 12 of them are in the clinical area of their training. We have programmed instruction and these students can progress at their own rate of speed. We do have a set number of hours that these students must complete in theory, and we do insist that they do have 25 days of clinical experience. This provides a lot of patient contact. The entrance requirements are basically the same as the other courses, however, it does not require a high school education. Since July 14, last year, we have had 37 to complete the course, and we've had 99 percent placement.

WELDING

Wallace Hull
State Area Vocational-Technical School
Nashville, Tennessee

I am Wallace Hull. I started in the welding field in 1951 when I went into the Armed Services. I came out and have been welding here, there, and everywhere ever since. The job I had previously before I came with the Nashville Area School was with the Nashville Gas Company on gas pipelines.

Mr. Sandlin says I know all about welding. That is going too far. Nobody can keep up with it really. I guess the welding technology has probably grown more in the past 18 years than any other industrial trade. We take our students and start them in welding oxyacetylene as a basis. The students will stay there approximately five to seven weeks, or a total of 175 hours. We move on from there into arc welding, or stick electrode welding, where they will spend time welding in all positions -- flat positions, vertical positions and overhead -- for a total of 390 hours. This is the base number of hours. However, they may take more time if they need it. We go from arc welding to heliarc, both tungsten inert gas and metal inert gas welding, for approximately 140 hours. Micrewire welding is really the going thing today in welding, semi-automatic welding with flux coat wire. This is one of the areas where there is going to be a big manpower demand. The welding industry is growing so fast that they still can't keep men. No one is hurting for a job in welding today. I might say to you, as counselors, that any welding experience that these boys can get in high school is a big help when they come into our program. A boy must have mechanical ability. He has to be able to work with his hands. You may find that your sharpest, brightest students will come in and have more trouble learning to weld than someone who can't even read and write.

I might give an example. One of our former counselors, Mr. Ward Collins, who is now principal at Mt. Juliet Elementary, came to me one day and told me he had a boy he didn't know if we could help or not. He had been in special education all of his life and couldn't even read and write. When he signed a paper he had to get out his Social Security card and copy his name from it. Everybody around here called him my shadow. I couldn't even turn around without him stepping on my heels. But he had as much natural ability as a welder as any student I have ever had. He had more desire to learn than most and tried even harder. He is now employed with the Nashville Bridge Company as a second class welder and doing well. Stayed in school about 8 months, I believe.

Of course, we like to get students who are pretty good in math. When you go into higher welding, you have some trigonometry, figuring your angles, doing your layout work, etc., but it is not mandatory. We have more jobs available now than probably any other skill in the Nashville area. I had a call last week for three people to go to Volunteer Structures, and I could only send two over there.

INDUSTRIAL ELECTRICITY

Harry Kleespies
State Area Vocational-Technical School
Nashville, Tennessee

My name is Harry Kleespies. Most students call me Mr. "K". I teach Industrial Electricity. It goes from changing a light to the very complicated electronic equipment. Now we hope when our students leave here they'll be able to do more than change a light bulb, but also you must realize that they're not going to be able to redesign some of this complicated equipment. There's no way we can go that deep here. However, we do expect a student to go out and do a job under supervision, when he first leaves here. Then he can advance and go out and work on his own without supervision. The point that I'm trying to make is that we are training students to take over at an entry level, not as a trained electrician.

As to what is actually taught, I've divided this class into three basic groups -- the residence electrician, the maintenance electrician, and the construction electrician. I've also tried to draw a linebetween those three, but that line really doesn't exist. They all seem to overlap. Basicallv the residential electrician will go into wiring services for houses. He will have to know what goes into a kitchen, what is required by the National Code and local code of how to wire a kitchen. He has to know how to place the lights in a room, how to find the center of the room, how to wire, the size wires, etc. He sould also know something about the intercom system and any other signal systems, doorbells, etc. In other words, how to do anything in the house. He has to know where to drill holes for the wire and mostly where "not" to drill holes. He has to know something of the background of how a house is built. In fact, they're building a mock-up house right now, trying to keep it as much like a house as possible.

Now getting into the maintenance, that's more or less plant maintenance and small maintenance on individual companies. He should know how to protect the equipment as well as the lives of the people on the job. That's the first thing. He should have background in how to "track" trouble. We try to keep them on basic ideas so that they can use those in developing their own skills getting into more complicated systems and equipment.

OFFICE MACHINE REPAIR

Gordon Harles
State Area Vocational-Technical School
Nashville, Tennessee

I'm Gordon Harles and I have the Office Machine Repair Shop. In Office Machine Repair we look for young boys possessing good aptitude and dexterity.

Along the education line, they must be 17 years of age and we would like for them to have had at least a fourth grade education. We train these students to repair and clean typewriters and adding machines.

In my class I have had approximately 50 students, and I find that the ones that have been the most successful were the handicapped or rehabilitated people who came through here.

BASIC ELECTRICITY

Walter Hood
State Area Vocational-Technical School
Nashville, Tennessee

I think all of us are glad to be here this morning, and we thank you for your attention. My name is Walter Hood. I teach the Electrician-Electronics Class. I might give you a small area of background. I've been in the electricity-electronics field since 1942. When I came out of the Navy I went with Moore-Hanley, Inc. and was with them 17 years as a television service representative as well as service manager. When I came with the Vocational-Technical School, I had been with Sears only a short time.

As Mr. Sandlin said, I taught Radio and TV when I first came. At the present time, and for the last year or so, I've been teaching Electricity-Electronics. We have had 53 boys and men through this class including the 19 students we now have. We teach the students coming into the school who will be going into Air Conditioning-Refrigeration, Industrial Electricity and Radio and TV. We would normally take 20 students into this class; however, presently we have 23. A spot sketch of what a person should have as he comes or goes into that area -- he should be able to figure math, or have some knowledge, not in great dept but certainly where he can figure from the standpoint of conductance, capacity, and reactance. He should be able to figure with the training that we give him to compute the circuits as we present them to him.

For the Air Conditioning Refrigeration Class we spend approximately 250 hours with the trainees when first enrolled. The Industrial Electrician people are with us approximately 300 hours although this could vary. Radio and TV people have approximately 1000 hours of training. This takes them right up to television itself. I might say this relative to the studies we have, we use three workbooks. The first is the primary components as related to circuitry. The second workbook is directly tube circuitry, and the third one is transistors. The Radio and TV students are taken through transistors and transistor circuitry. They then have approximately 200 hours on regular bench or lab training after this.

APPENDIX

SCHEDULE FOR VOCATIONAL-TECHNICAL SEMINAR

June 7-11, 1971

MONDAY - JUNE 7

8:30 - 9:30 Welcome and Orientation - Room C-105
Mr. Edward L. Weld, Director, Nashville State Technical Institute
Mr. Jack L. Sandlin, Superintendent, Area Vocational-Technical School
Mrs. Dorothy Pease, Supervisor, Guidance, Metro School System
Dr. Gilda Greenberg, Associate Professor, University of Tennessee at Nashville

9:30 - 10:30 Registration

10:30 - 10:45 Break

10:45 - 12:15 Motivation, Exit Levels, Learning and Teaching--
Mr. Harold Gregory, Director, Curriculum and Instructional Services, Division of Vocational-Technical Education

12:15 - 1:00 Lunch

1:00 - 2:00 Student Services - Area Vocational-Technical School
Mr. Lee Rotenberry, Supervisor
Mrs. Nancy Holshouser, Counselor
Mr. Cliff Huddleston, Counselor

2:00 - 3:00 Student Services, Nashville State Technical Institute
Mr. Paul Morrow, Director
Miss Dorothy Rich, Counselor

3:00 - 3:15 Break

3:15 - 4:15 Follow-up Methods and Procedures--Mr. Jim Judd, Supervisor, Area Vocational-Technical School, Division of Vocational-Technical Education

TUESDAY - JUNE 8

8:30 - 9:00 Speaker--Mr. E. H. Kriel, Director of Industrial Relations, Aladdin Industries, Inc.

9:00 - 10:00 Educational Resource Center
Mrs. Diane Groves, Head
Miss Janet Turner, Assistant Librarian

10:00 - 10:30 Speaker--Mr. Harold J. Black, Vice President of Engineering and Development, AVCO Aerostructures Division

10:30 - 10:45 Break

10:45 - 12:15 E.R.I.C. Materials - V.I.E.W. Program, Dr. Gary Bice, Director, Coordinating Research Unit, University of Tennessee at Knoxville

12:15 - 1:00 Lunch

1:00 - 2:00 Electronic Engineering Technology

2:00 - 3:00 Business Data Processing Technology

3:00 - 3:15 Break

3:15 - 4:15 Women in the World of Work - Dr. Gilda Greenberg, U. T. at Nashville

WEDNESDAY - JUNE 9

8:30 - 9:30 Chemical Engineering Technology

9:30 - 10:30 Industrial Engineering Technology

10:30 - 10:45 Break

10:45 - 12:15 Career Development, Dr. Gilda Greenberg, U. T. at Nashville
Attitude Toward the World of Work, Dr. Joe Cozy, Assistant Professor, U. T. at Nashville

12:15 - 1:00 Lunch

1:00 - 3:45 Tour: National Life and Accident Insurance Company

THURSDAY - JUNE 10

8:30 - 9:30 Mechanical Engineering Technology

9:30 - 10:30 Pretechnical and Remedial Programs

10:30 - 10:45 Break

10:45 - 12:15 Assemble in Multi-Purpose Room of A.V.T.S.
Tour: Cosmetology, Drafting, Child Care, Certified Lab Assistant, Watchmaking and Learning Lab

12:15 - 1:00 Lunch

1:00 - 3:45 Tour: Aladdin Industries, Inc.

FRIDAY - JUNE 11

8:30 - 10:30 Assemble in Multi-Purpose Room of A.V.T.S.
Tour: Unit Records, Office Occupations, Health Occupations, Basic Electricity, Welding, Machine Shop, Tool and Die, and Office Machine Repair

10:30 - 10:45 Break

10:45 - 12:15 Assemble in Multi-Purpose Room of A.V.T.S.
Tour: Radio and T.V., Industrial Electricity, Auto Body and Fender Repair, Auto Mechanic , Regrigeration and Air Conditioning, Food Services

12:15 - 1:00 Lunch

1:00 - 3:00 Expectations--Mr. N. A. Crippens (Audio Tape)
Cultural Diversity and Values--Dr. Gilda Greenberg, U. T. at Nashville

3:00 - 3:15 Break

3:15 - 4:15 Evaluation

Distribution of Resource Materials

COMPOSITE OF TALLY RESULTS OF PRE-TEST & POST EVALUATION
OF GUIDANCE INSTITUTE

(June 7 - June 11, 1971)

(Many of the responses in the comments appeared two or more times)

1. Do you understand the role and function of the Area Vocational-Technical counselor?

	Very	Reasonably	Some	Very Little	Not At All
Pre	1	11	14	4	0
*Post	23	6	0	0	0

2. Do you understand the role and function of the Technical Institute counselor?

	Very	Reasonably	Some	Very Little	Not At All
Pre	1	10	15	4	0
Post	20	9	0	0	0

3. Do you feel that the development of vocational maturity can be assisted in the typical public school system?

	Very	Reasonably	Some	Very Little	Not At All
Pre	12	5	8	5	0
**Post	18	7	2	0	0

4. Do you feel that the development of vocational maturity is being assisted in the typical school system?

	Very	Reasonably	Some	Very Little	Not At All
Pre	0	5	18	6	1
Post	2	13	11	3	0

5. Do you feel equipped to help high school youth move comfortably into the training in the Area Vocational-Technical School?

	Very	Reasonably	Some	Very Little	Not At All
Pre	1	16	9	4	0
Post	19	10	0	0	0

6. Do you feel equipped to help high school youths move comfortably into the Associate Degree program at the Technical Institute?

	Very	Reasonably	Some	Very Little	Not At All
Pre	1	13	14	2	0
Post	19	10	0	0	0

7. Do you feel that you are able to gather occupational information efficiently enough?

	Very	Reasonably	Some	Very Little	Not At All
Pre	3	13	13	1	0
Post	10	15	4	0	0

8. Do you feel that your ready store of occupational information is sufficient to handle your day-to-day professional needs?

	Very	Reasonably	Some	Very Little	Not At All
Pre	0	6	15	7	2
Post	3	19	5	2	0

9. Overall planning of the seminar.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
25	4	0	0	0

COMMENTS:

1. Best that I have attended.
2. Should have had more time to visit A.V.T.S. shops.
3. Two hour blocks of time were tiring physically.
4. A little too much time on each department.
5. Exceedingly well planned.
6. Varied activities with presentations both theoretical and practical level.

10. Overall evaluation of the learning experiences provided by the seminar.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
25	3	1	0	0

COMMENTS:

1. Variety to the right degree.
2. Mrs. Newton and Dr. Cozy were very good.
3. I needed this seminar greatly. I feel that I can help my children more.
4. Excellent goals - good implementation - enjoyable and stimulating.

11. Adequacy of staff in lecturing and promoting learning environment.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
25	3	1	0	0

COMMENTS:

1. Very good - excellent - wonderful.
2. Good balance of theory and practice.
3. It would be hard to suggest how it could be improved.
4. All staff members appeared prepared and competent in their area.

12. Evaluation of Technical School "in-school" tours.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
22	6	1	0	0

COMMENTS:

1. A little rushed, but since we came back for a visit, not a serious problem.
2. I felt too much time was spent on them.
3. Extensive information and interesting demonstrations of the work being conducted.
4. Informative and enjoyable.

13. Evaluation of Area Vocational-Technical School "in-school" tours.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
10	12	6	1	0

COMMENTS:

1. Not enough time in the shops, but we have been invited to return for more leisurely visit.
2. Explanations of programs were most interesting and informative.

14. Evaluation of field trip to National Life and Accident Insurance Company.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
9	10	8	1	0

COMMENTS:

1. Should have been more job oriented.
2. I would like to have talked to agents, etc., as well as data processing people.
3. Too building oriented.

15. Evaluation of field trip to Aladdin Industries, Inc.

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
19	9	1	0	0

COMMENTS:

1. Feel more adequate in talking to students about this type of work.
2. Informative - a side of the world of work that I had not heretofore observed closely.

16. Considering the objectives of the seminar, how effectively did the presenters contribute to learning experiences of participants?

Very Well	Reasonably	Adequate	Less Than Adequate	Poor
25	4	0	0	0

COMMENTS:

1. Question and answer periods following the lectures did much to produce effectiveness.
2. Excellent.
3. All objectives and desired counselor competencies were implemented through experiences provided.
4. Every presentation was excellent. I enjoyed every minute of the seminar.

17. Taking into consideration the Objectives of the seminar, we would appreciate your candid suggestions concerning areas of weakness. We wish to strengthen the program in every way possible for future efforts. Please use reverse side of this sheet if more space is needed.

1. The best workshop I have attended in my 15 years in guidance.
2. It has been great, very profitable.
3. The amount of information has been outstanding.
4. Thank you for a very pleasant and informative week.
5. A.V.T.S. counselors were "short changed" time wise.
6. N.S.T.I. faculty lectures concerning each area was particularly enjoyed.
7. More contact with students and time to interact with them.
8. It was great. I feel much more competent. You will be hearing from me.
9. This has been a very good week! The leadership was excellent and the program just as good.
10. Excellent. Suggest, however, that the break be at 9:30.
11. Suggest that workshop be one week later in the summer.
12. The schedule rushed us a little.
13. Lack of opportunity for interaction among participants.
14. Course descriptions could have possibly been less detailed.

15. Many students in my school situation can benefit from the programs at N.S.T.I. and V.A.T.S. and I now feel better equipped to work with these students.
16. A most rewarding experience and about the only way we could really get the needed information concerning the two schools and the opportunities here.
17. More speaker with meat.
18. Personalities of staff created an environment conducive to learning.
19. More student participation. Hands-on experiences should have been provided. More group discussions. Overall the seminar was great.
20. Well organized to meet all needs.
21. Follow the same format and future seminars should be successful.
22. The food and hospitality were great.
23. The seminar was tailor-made for counselors desiring to learn more about vocational guidance.
24. The resource materials cited and distributed were realistic and practical.
25. Developed within me a sympathetic attitude toward Vocational-Technical Education by informing me of the programs available to my students, giving me insight into industrial and business practices and procedures, and altering my prespective on the occupation development of students.
26. We tried to cover too much too quickly.
27. The cordiality and facilities were excellent.
28. It would have been much better if the papers we are required to submit to U.T. could have been completed by the end of the seminar.

*One participant was unable to complete post evaluation due to absence.

**In a couple of instances the participant overlooked a response or chose not to respond to certain questions.

SEMINAR PARTICIPANTS

VOCATIONAL-TECHNICAL SEMINAR
June 7-11, 1971
Nashville State Technical Institute

Participant	School
Shirley T. Becker	Hillwood High School
Mary A. Campbell	Donelson High School
William E. Crawford	Glencliff High School
Paul Dorris	Isaac Litton High School
Margaret Douglas	Highland Heights High School
Katie Elder	Continuing Education Center
Roger Flannery	Antioch High School
Martha Geist	Neely's Bend Junior High
Mary L. Hamby	Waverly-Belmont Junior High
Annette L. Hendrix	Maplewood High School
Katholeen Hobbs	Apollo Junior High
W. E. Hunt	Donelson High School
Jeanette Jones	Meigs Junior High
Ruth F. Kilgore	West End Junior High
Lola O. King	Donelson High School
Genella Markum	Antioch High School
Rob McGee	Two Rivers High School
Tresa Miller	Hillsboro High School
Lorene Moss	Hillwood High School
Dorothy D. Nelson	DuPont High School
Bernidene Pinkney	Cameron High School
Robert C. Roberts	Cohn High School
Mary Seymore	Donelson High School
Christine Steele	Cohn High School
John H. Taylor	Apollo Junior High
Bart Tucker	Hume-Fogg Technical-Vocational High School
Robert B. Vann	East High School
Vivian Watkins	Washington Junior High
Elizabeth Williams	Joelton High School
Jean Windrow	East High School
Nancy Holshouser	Area Vocational-Technical School
Cliff Huddleston	Area Vocational-Technical School
Lee Rotenberry	Area Vocational-Technical School
Paul Morrow	Nashville State Technical Institute
Dorothy Rich	Nashville State Technical Institute

Educational Psychology 5850
Problems in Educational Psychology
and Guidance

Dr. G. M. Greenberg
June 7-11, 1971

In developing this institute, several counselor competencies* were considered. These competencies should become a part of the professional counselor's goals. How do you rate yourself?

1. The counselor needs competence in utilizing and modifying a general perspective regarding the occupational world.

2. The counselor needs competence in understanding the psychological, sociological and economic variables contributing to changing concepts of work as a part of society.

3. The counselor needs competence in understanding the process of vocational development.

4. The counselor needs competence in collecting, organizing and disseminating vocational information.

5. The counselor needs competence in communicating information to students concerning post high school training opportunities.

6. The counselor needs competence in understanding basic principles of business and industrial management.

7. The counselor needs competence in utilizing the talents and services of the business-labor-industrial community in performing the vocational guidance function.

8. The counselor needs competencies in developing working relationships with non-secondary school counselors.

REQUIREMENTS

1. After each day, a one-page typewritten analysis of the learning experiences should be prepared. This will provide feedback needed for any revision of daily planning.

   The first paper will be due Tuesday morning, June 8th and the last paper, Friday morning, June 11.

*Adapted from "Conference on Vocational Aspects of Counselor Education", Dec. 12-15, 1965, Warrenton, Va.

2. Each participant is requested to develop a workable project for his or her school based upon the experiences of this institute. On Friday, June 11th an outline of one to three pages should indicate:

   a. the nature of the project to be undertaken in the fall.

   b. the methods for pursuing this plan.

   c. the types of research, library work, etc. that will be used in preparing the report.

3. The final paper must be completed by Monday, July 5th. Please make certain to get these projects to Dr. Gilda M. Greenberg, The University of Tennessee, 323 McLemore Avenue, Nashville, Tennessee 37203 - Room C-5.

   Length of paper - maximum 15 typewritten pages. Format - use APA standards. (distributed June 7, 1971)

GOALS OR OBJECTIVES

1. Increased understandings of role and function of the vocational-technical schools and technical institutes by secondary school counselors and of secondary school counselors by vocational and technical personnel.

2. Strengthen counselor competencies in procedures for assisting school youth to move comfortably and purposefully into high school and post high school training in vocational and technical education programs.

3. Assist counselors to gain background experience whereby they can comfortably and confidently counsel with youth who do not wish to pursue the baccalaureate degree program.

4. Make available to counselors realistic, practical, and usable resource materials.

5. Increase knowledge of the developmental pattern in achieving vocational maturity and how development of vocational maturity may be assisted in the typical school.

Questions to be Answered

University of Tennessee
Dr. G. M. Greenberg

1. What distinctions are to be drawn among jobs, occupations and careers?

2. How may occupations be classified so that both their relationship and their major differences become clear?

3. What major trends exist with respect to the changing nature of our occupational structure?

4. What major trends exist with respect to entry occupations?

5. How can practicing school counselors be kept up to date on changes in occupations and occupational patterns?

6. What does "work" mean to those in various subcultures of our society?

7. How are concepts regarding "work" currently changing in our society?

8. Why is some "work" more highly respected than others to most members of a society?

9. What kinds of factors affect occupational choice?

10. What kinds of occupational choices are typically expected of students at various grade levels from various kinds of socio-economic backgrounds?

11. What kinds of vocational choice theories does the practicing counselor feel comfortable with as he seeks to understand occupational choices made by his students?

12. What are the commonly available sources of vocational information? How should a given piece of vocational information be evaluated in terms of its appropriateness for use in high school guidance? In elementary school guidance? In higher education?

13. How can vocational information be meaningfully communicated to students in groups? to individuals?

14. How can vocational information be usefully disseminated through teachers?

15. What training is required for entry into various occupations?

16. How can the "vocational" and "academic" portions of the curriculum and faculty be brought into more harmonious and productive working relationships?

17. What would make one kind of training opportunity more appropriate for a given student than another?

18. What sources of financial aid exist for the needy student?

19. What kinds of education are employers looking for in entry workers--and why?

20. What kinds of student work experience programs might be worked out with the business world?

21. How can and should school counselors work with counselors employed in vocational rehabilitation, veterans administration settings, and technical institutes?

EDUCATIONAL INFORMATION AND GUIDANCE

A SELECTED ANNOTATED BIBLIOGRAPHY

Bloom, A. Martin. Counseling the College-Bound Student: Successful Programs and Practices, Englewood Cliffs, N. J.: Prentice-Hall, 1969.

This is a how-to-do it book for practicing counselors. It describes in detail numerous programs and practices which have proven successful in providing effective pre-college guidance programs in public secondary schools.

Clark, Harold F. and Sloan, Harold S. Classrooms in the Military. New York: Teachers College Bureau of Publications, 1964.

One of a series of volumes by Clark and Sloan which demonstrates the volume of education conducted in non-formal educational settings. Other books in this fascinating project include: Classrooms in the Factories (1960), Classrooms in the Stores (1962) and Classrooms on Main Street (1966).

Computer-Based Vocational Guidance Systems. Washington, D. C.: U. S. Office of Education, 1969.

A collection of papers dealing with client-machine interaction. An excellent summary of the state of "hardware" services in educational and vocational decision-making.

Gannon, Frederick B. The Many Faces of Kevin Michael Pullen: A Guidance Case Study. New York: College Entrance Examination Board, 1969.

A case study which illustrates the complex dynamics of vocational choice and intermediate educational decisions. Also published by CEEB: Preparing School Counselors in Educational Guidance (1967); From High School to College: Readings for Counselors (1965); B. Alden Thresher, College Admissions and the Public Interest (1966).

Guidelines for Improving Articulation between Junior and Senior Colleges. Washington, D. C.: American Council on Education, 1966.

A statement of a joint committee of two professional organizations concerned with junior-senior college articulation. Suggests procedures for development of effective transfer policies.

Guiding the College-Bound Student: An Outline of Suggested Content for a Training Program. Evanston, Ill.: National Association of College Admissions Counselors, 1970.

Prepared by members of the Professional Education Committee of NACAC-counselors, counselor educators, supervisors, and admissions officers--as a guide for pre-service and in-service training of counselors in educational guidance.

Herr, Edwin L. and Cramer, Stanley H. Guidance of the College Bound: Problems Practices, and Perspectives. New York: Appleton-Century-Crofts, 1969.

Guiding the college bound is viewed within the framework of decision-making theory and vocational development theory. Theoretical emphasis is complemented by practical chapters on groups, the application process, the admissions decision, ethics, and informational sources.

Hollis, Joseph W. and Hollis, Lucille V. Personalizing Information Processes: Educational, Occupational and Personal-Social. London: Collier-Macmillan Ltd., 1969.

Chapters 4-8 of this excellent text offer a comprehensive treatment of the collection, storage, retrieval, dissemination and integration of educational information in the decision-making process.

Looking at Private Trade and Correspondence Schools. Washington, D. C.: American Personnel and Guidance Association, 1963.

This booklet suggests guidelines for evaluating trade and correspondence schools.

Pulcrano, Charles. "The Class of 1960: A Study of the College Survival Rate", The School Counselor, 16, March 1969, pp. 277-280.

A study which demonstrates the need for extreme caution in making predictions of college success.

Reissa, Jean and Fox, Mildred G. Guiding the Future College Student. Englewood Cliffs, N. J.: Prentice-Hall, 1968.

Deals with the question of what is college guidance, discusses patterns of organization, acquiring and sharing information about colleges, and understanding and interpreting the admissions process.

Trent, James W. and Medsker, Leland L. Beyond High School. San Francisco: Jossey-Bass, Inc., 1968.

A follow-up of 10,000 high school graduates which seeks to determine the different impacts of college and employment on values and attitudes.

Venn, Grant. Man, Education, and Work: Postsecondary Vocational and Technical Education. Washington, D. C.: American Council on Education, 1964.

An investigation of education for semiprofessional, technical and skilled levels. Suggestions for the improvement of vocational and educational guidance, counseling and placement.

AN OUTLINE FOR REPORTING OBSERVABLE ASPECTS OF A BUSINESS OR INDUSTRIAL FIRM

I. The business or industry

- A. Name and address of firm
- B. Products or services
- C. Major operations performed

II. Physical features of the environment

- A. Transportation to and from firm
- B. Mobility on premises
  1. Location of parking lot, access to buildings
  2. Location of cafeteria, washrooms, fire exits
  3. Space for movement, condition of floors
- C. Lighting, heat, humidity, ventilation
- D. Sanitation, orderliness
- E. Noise, vibration
- F. Health and accident hazards
- G. Other physical features

III. Psychosocial features of the environment

- A. Characteristics of employees
  1. Predominant age range
  2. Male vs. female
  3. Minority group members
  4. Physically disabled
- B. Interpersonal relations
  1. Isolated task vs. joint operation
  2. Opportunity for conversation
  3. Close vs. occasional supervision
- C. Other psychosocial features

IV. Physical demands of work performed

- A. Sitting vs. standing
- B. Limbs required
- C. Visual acuity
- D. Color vision
- E. Other sensory requirements

F. Finger dexterity
G. Weight lifted
H. Other physical demands

V. Psychological demands of work performed

A. Range of intelligence
B. Memory and other mental demands
C. Precision and other pressures
D. Repetitiveness vs. variety
E. Adaptability
F. Other psychological demands

VI. Psychological rewards of work performed

A. Autonomy, freedom of behavior
B. Responsibility vs. lack of responsibility
C. Exercise of initiative, judgment, creativity
D. Direct or indirect service to others
E. Other psychological rewards

SEVEN STEPS TO STAGNATION

1. WE'VE NEVER DONE IT THAT WAY.
2. WE'RE NOT READY FOR THAT.
3. WE'RE DOING ALL RIGHT WITHOUT IT.
4. WE TRIED THAT ONCE BEFORE.
5. IT COSTS TOO MUCH.
6. THAT IS NOT OUR RESPONSIBILITY.
7. IT JUST WON'T WORK.

THE CALF-PATH

One day, through the primeval wood,
A calf walked home, as good calves should;
But made a trail all bent askew,
A crooked trail as all calves do.

Since then two hundred years have fled,
And, I infer, the calf is dead.
But still he left behind his trail,
And thereby hangs my moral tale.

The trail was taken up next day
By a lone dog that passed that way;
And then a wise bell-wether sheep
Pursued the trail o'er vale and steep,
And drew the flock behind him, too,
As good bell-wethers always do.

And from that day, o'er hill and glade,
Through those old woods a path was made;
And many men wound in and out,
And dodged, and turned, and bent about
And uttered words of righteous wrath
Because 'twas such a crooked path.

But still they followed—do not laugh--
The first migrations of that calf,
And through this winding wood-way stalked,
Because he wobbled when he walked.

This forest path became a lane,
That bent, and turned, and turned again;
This crooked lane became a road,
Where many a poor horse with his load
Toiled on beneath the burning sun,
And traveled some three miles in one,
And thus a century and a half
They trod the footsteps of that calf.

The years passed on in swiftness fleet,
The road became a village street;
And this, before men were aware,
A city's crowded thoroughfare;
And soon the central street was this
Of a renowned metropolis;
And men two centuries and a half
Trod in the footsteps of that calf.

THE CALF-PATH (continued)

Each day a hundred thousand rout
Followed the zigzag calf about;
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuried dead.
They followed still his crooked way,
And lost one hundred years a day;
For thus such reverence is lent
To well-established precedent.

A moral lesson this might teach,
Were I ordained and called to preach;
For men are prone to go it blind
Along the calf-paths of the mind,
And work away from sun to sun
To do what other men have done.

They follow in the beaten track,
And out and in, and forth and back,
And still their devious course pursue,
To keep the path that others do.

But how the wise old wood-gods laugh,
Who saw the first primeval calf!
Ah! many things this tale might teach,—
But I am not ordained to preach.

A CURRICULUM TO MEET THE NEEDS

OR

THE ANIMAL SCHOOL

Once upon a time, the animals decided they must do something heroic to meet the problem of "a new world." So they organized a school. They adopted an activity program or curriculum consisting of running, climbing, swimming and flying. To make it easier to administer the curriculum, all the animals took all the subjects.

The duck was excellent in swimming, in fact, better than the teacher, but he made only passing grades in flying and was very poor in running. Since he was slow in running, he had to stay after school and also drop swimming in order to practice running. This was kept up until his web feet were badly worn and he was only average in swimming. But average was acceptable in the school, so nobody worried about it - except the duck.

The rabbit started at the top of the class in running, but had a nervous breakdown because of so much make-up work in swimming.

The squirrel was excellent in climbing until he developed frustration in the flying class where his teacher made him start from the ground up instead of from the tree-top down. He also developed "Charley Horses" from over-exertion and then got C in climbing and D in running.

The eagle was a problem child and was disciplined severely. In the climbing class, he beat all the others to the top of the tree, but insisted on using his own way to get there, which provoked the teacher.

At the end of the year, an abnormal eel that could swim exceedingly well and also run, climb and fly a little had the highest average and was valedictorian.

The prairie dogs stayed out of school and fought the tax levy because the administration would not add digging and burrowing to the curriculum. They apprenticed their children to a badger and later joined the ground-hogs and gophers to start a successful private school.

S. Reavis

School of Education Northwestern University

THE POOR SCHOLAR'S SOLILOQUY

Stephen M. Corey
University of Chicago

No I'm not very good in school. This is my second year in the seventh grade and I'm bigger and taller than the other kids. They like me all right, though, even if I don't say much in the schoolroom, because outside I can tell them how to do a lot of things. They tag me around and that sort of makes up for what goes on in school.

I don't know why the teachers don't like me. They never have very much. Seems like they don't think you know anything unless they can name the book it comes out of. I've got a lot of books in my own room at home -- books like Popular Science Mechanical Encyclopedia, and the Sears' and Ward's catalogues, but I don't very often just sit down and read them through like they make us do in school. I use my books when I want to find something out, like whenever Mom buys anything second-hand I look it up in Sears' or Ward's first and tell her if she's getting stung or not. I can use the index in a hurry to find the thing I want.

In school, though, we've got to learn whatever is in the book and I just can't memorize the stuff. Last year I stayed after school every night for two weeks trying to learn the names of the Presidents. Of course, I know some of them like Washington and Jefferson and Lincoln, but there must have been thirty altogether and I never did get them straight.

I'm not too sorry though because the kids who learned the Presidents had to turn right around and learn all the Vice Presidents. I am taking the seventh grade over but our teacher this year isn't so interested in the names of the Presidents. She has us trying to learn the names of all the great American inventors.

I guess I just can't remember names in history. Anyway, this year I've been trying to learn about trucks because my uncle owns three and he says I can drive one when I'm sixteen. I already know the horsepower and number of forward and backward speeds of twenty-six American trucks, some of them Diesels, and I can spot each make a long way off. It's funny how that Diesel works. I started to tell my teacher about it last Wednesday in science class when the pump we were using to make a vacuum in a bell jar got hot, but she said she didn't see what a Diesel engine had to do with our experiment on air pressure so I just kept still. The kids seemed interested though. I took four of them around to my uncle's garage after school and we saw the mechanic, Gus, tearing a big truck Diesel down. Boy, does he know his stuff!

I'm not very good in geography either. They call it economic geography this year. We've been studying the imports and exports of Chile all week, but I couldn't tell you what they are. Maybe the reason is I had to miss school yesterday because my uncle took me and his trailer truck down state about two hundred miles and we brought almost ten tons of stock to the Chicago market.

He had told me where we are going and I had to figure out the highways to take and also the mileage. He didn't do anything but drive and turn where I told him to. Was that fun! I sat with a map in my lap and told him to turn south or southeast or some other direction. We made seven stops and drove over five hundred miles round trip. I'm figuring now what his oil cost and also the wear and tear on the truck -- he calls it depreciation -- so we'll know how much we made.

I even write out all the bills and send letters to the farmers about what their pigs and beef cattle brought at the stock yards. I only made three mistakes in my letters last time, my aunt said -- all commas. She's been through high school and reads them over. I wish I could write school themes that way. The last one I had to write was on, "What a Daffodil Thinks of Spring," and I just couldn't get going.

I don't do very well in school in arithmetic either. Seems I just can't keep my mind on the problems. We had one the other day like this:

> If a 57 foot telephone pole falls across a cement highway so that 17 3/6 feet extend from one side and 14 9/7 feet from the other, how wide is the highway?

That seemed to me like an awfully silly way to get the width of a highway. I didn't even try to answer it because it didn't say whether the pole had fallen straight across or not.

Even in shop I don't get very good grades. All of us kids made a broom holder and a bookend this term and mine were sloppy. I just couldn't get interested. Mom doesn't use a broom anymore with her new vacuum cleaner and all our books are in the bookcase with glass doors in the parlor. Anyway, I wanted to make an end gate for my uncle's trailer but the shop teacher said that meant using metal and wood both and I'd have to learn how to work with wood first. I didn't see why but I kept still and made a tie rack at school and the tail gate after school at my uncle's garage. He said I saved him $10.

Civics is hard for me, too. I've been staying after school trying to learn the "Articles of Confederation" for almost a week because the teacher said we couldn't be good citizens unless we did. I really tried, because I want to be a good citizen. I did hate to stay after school, though, because of a bunch of us boys from the south end of town have been cleaning up the old lot across from Taylor's Machine Shop to make a playground out of it for the little kids from the

Methodist home. I made the jungle gym from old pipe and the guys made me Grand Mogul to keep the playground going. We raised enough money collecting scrap this month to build a wire fence clear around the lot.

Dad says I can quit school when I'm fifteen and I'm sort of anxious to because there are a lot of things I want to learn how to do and as my uncle says, I'm not getting any younger.

Childhood Education, Journal of the Assocation for Childhood Education, January, 1944.

_____

ANSWER THE FOLLOWING ACCORDING TO EMPLOYMENT STATUS

EMPLOYED

1. I work for:

_____
Employer

at _____
City State

as _____
Job Title

2. My employment is:

☐ Full-Time ☐ Part-Time

My work is:

☐ Related ☐ Not related to the training I received.

3. My hourly rate is approximately:

☐ $1.60 or less
☐ $1.60 to $2.00
☐ $2.00 to $2.50
☐ $2.50 to $3.00
☐ $3.00 or more

UNEMPLOYED

Unemployed

1. ☐ I am available for employment.
☐ I am not available for employment.
2. ☐ I am attending school.
☐ I am not attending school.

Military

3. ☐ I am in the Military Service

My military assignment is:

☐ Related
☐ Not related to the training I received.

Please rate the following as:	Above Average	Average	Below Average
School's Facilities	_____	_____	_____
Instructor's Knowledge	_____	_____	_____
Instructor's Teaching Ability	_____	_____	_____
Benefit of Training to obtain job held or sought.	_____	_____	_____

For correction of name and/or address see reverse side

Please correct any error in your name or address.

_____
Name

_____
Street Address

_____
City State Zip

HAPPY BIRTHDAY

You entered our school to learn a trade;
You obtained the skills and had it made.

You've been out now, for a little while;
And we'd like to know if now you smile.

As a result of the training you did receive;
Is your paycheck bigger, as we like to believe?

Is employment better? Have you made it pay?
Will you tell us about it without delay?

Please complete and return this form, Okay?
And may you have a Happy Birthday!

NAME _____ DATE _____

To evaluate and improve our training programs, we need and would appreciate your help. Please, answer the set of questions that apply to you.

Thank You

Answer ONLY if EMPLOYED

☐ Full Time ☐ Part Time

1. Since contacted in October 1970 I have:
   - ☐ Not changed employer or job title.
   - ☐ Not changed employer, but have changed job title.

   _____
   New Job Title
   - ☐ Changed employers _____ time(s).
     How Many

   _____
   Present Employer's Name

   _____
   City, State, Zip

   _____
   Payroll Job Title

2. After becoming employed, I received a pay raise. Within
   - ☐ 1 month . _____ per hour
   - ☐ 6 months . _____ per week
   - ☐ 12 months . _____ per month
   - ☐ Over 12 months . _____ per year

3. I feel the training received at your school has been helpful to my employment and/or advancement in my job.
   ☐ yes ☐ no

4. I am currently receiving (or have had) additional training.
   - ☐ yes . ☐ no
   - ☐ In an Area School . ☐ Plan to in near future
   - ☐ By Employer .
   - ☐ Other Facility

5. Additional Comments: _____

Answer ONLY if UNEMPLOYED

1. My last employer since leaving school was:

   _____
   Employer Name Date left

   _____
   City, State, Zip

2. I am currently seeking employment
   ☐ yes ☐ no

3. I feel the training received at your school was helpful in my past employment.
   ☐ yes ☐ no

4. I am currently continuing my education.
   - ☐ yes . ☐ no
   - ☐ In an Area School . ☐ I have had additional training
   - ☐ Other Facility . ☐ I plan to take additional training

5. Additional Comments: _____

***** CHANGE OF STATUS FORM *****

06-DICKSON AREA VOCATIONAL/TECHNICAL SCHOOL

DATE / /

THIS INFORMATION REFLECTS THE
STATUS OF THIS STUDENT AS OF : 10/05/70

SS 410-72-6076 CHAMBERS, PEGGY L

MAILING ADDRESS: RT 1
STEWART, TENNESSEE 37175

CURRENTLY ENROLLED IN USCE 17.3706 FARMER'S INCOME TAX HOURS TRAINED
CURRENT LEVEL OF TRAINING: SUPPLEMENTARY _____

THE SPACE PROVIDED BELOW IS TO BE USED TO CHANGE THE STUDENT'S RECORD.
THERE ARE THREE AREAS SHOWN, BUT ONLY ONE AREA MAY BE USED TO SHOW CHANGE OF STATUS.

**********----1----**********

----NON-COMPLETION----

REASONS

1___POOR ATTENDANCE 5___RELOCATED 9___PLACED IN OCCUPATION TRAINED FOR

2___LACK OF PROGRESS 6___FINANCIAL 10___PLACED IN OCCUPATION RELATED TO TRAINING

3___MILITARY 7___DISCIPLINARY 11___PLACED IN OCCUPATION NON-RELATED TO TRAINING

4___ILLNESS 8___CONTINUED FULL-TIME IN SCHOOL 12___OTHER

13___NEVER OFFICIALLY ENROLLED

**********----2----**********

----COMPLETION---- STUDENT'S DOT CODE_____(NINE DIGITS)

___PREPARATORY COMPLETION ___SUPPLEMENTARY COMPLETION ___SECONDARY COMPLETION

IF PREPARATORY COMPLETION CHECK ONE BELOW

EMPLOYED UNEMPLOYED

1___PLACED IN OCCUPATION TRAINED FOR 4___ENTERED ARMED FORCES

2___PLACED IN OCCUPATION RELATED TO TRAINING 5___CONTINUED FULL-TIME IN SCHOOL

3___PLACED IN OCCUPATION NON-RELATED TO TRAINING 6___OTHER REASONS NOT IN LABOR FORCE

**********----3----**********

----CHANGE AREA OF TRAINING----(IF THIS AREA IS USED, HOURS TRAINED MUST BE ZERO)

FROM USCE 17.3706 FARMER'S INCOME TAX

TO USCE _____ _____

Transparency No. 1

E R I C

Educational Resources Information Center

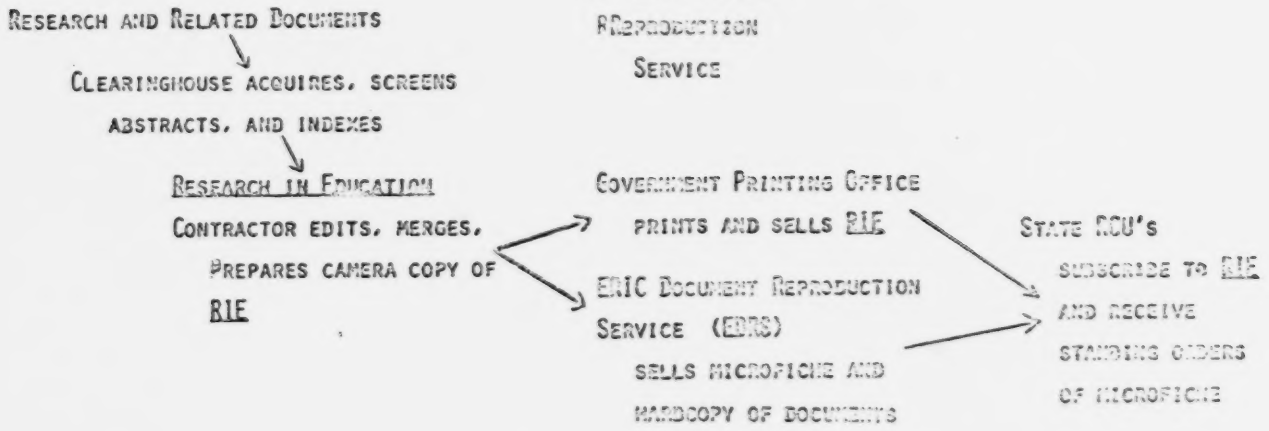
A national information system for education

I. Central ERIC - sponsoring agency at the U.S. Office of Education, NCEC
(National Center for Educational Communication)

II. ERIC Facility - computer contractor

III. Twenty Clearinghouses

IV. ERIC Document
Reproduction
Service



ERIC INFORMATION PRODUCTS

RIE - Research in Education

CIJE - Current Index to Journals in Education

SPECIAL COLLECTIONS

PACE - Projects to Advance Creativity in Education
FUNDED BY THE U.S. OFFICE OF EDUCATION

MANPOWER INDEX
DOCUMENTS OF PROJECTS FUNDED BY THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE; LABOR; HOUSING AND URBAN DEVELOPMENT; AGRICULTURE; DEFENSE; AND THE OFFICE OF ECONOMIC OPPORTUNITY

ERIC CLEARINGHOUSE ON VOCATIONAL AND TECHNICAL EDUCATION
(VT-ERIC)

INSTRUCTIONAL MATERIALS
RESEARCH REPORTS
CURRICULUM STUDIES
CONFERENCE PROCEEDINGS
INFORMATION ANALYSIS PAPERS

MAJOR PUBLICATIONS:

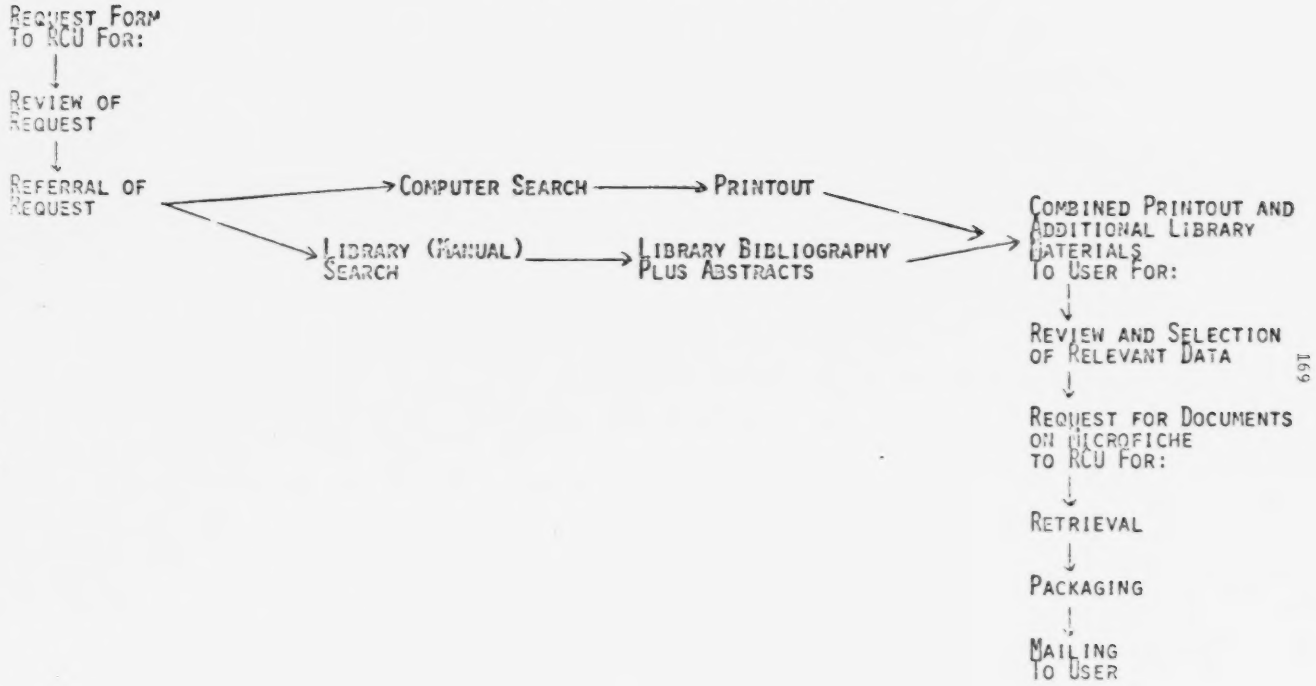
ABSTRACTS OF INSTRUCTIONAL MATERIALS
IN VOCATIONAL-TECHNICAL EDUCATION (AIM)

ABSTRACTS OF RESEARCH AND RELATED MATERIALS
IN VOCATIONAL-TECHNICAL EDUCATION (ARM)

Transparency No. 4

TENNESSEE RESEARCH COORDINATING UNIT FOR VOCATIONAL EDUCATION

Flow of Information Requests



HOW TO USE ERIC

Transparency No. 5

IF YOU ARE SEARCHING FOR INFORMATION ON A SPECIFIC SUBJECT

1 THESAURUS

CHECK THE ERIC THESAURUS

-- SELECT THE DESCRIPTOR(S) THAT BEST DESCRIBE YOUR AREA OF INTEREST

2 RIE SUBJECT INDEXES

SEARCH THE RESEARCH IN EDUCATION (RIE) SUBJECT INDEXES FOR DESCRIPTOR(S) SELECTED

-- NOTE THE TITLE ENTRIES UNDER THE DESCRIPTOR(S)

-- NOTE THE ED NUMBER FOR TITLES OF INTEREST

3 RIE RESUMÉS CATALOG

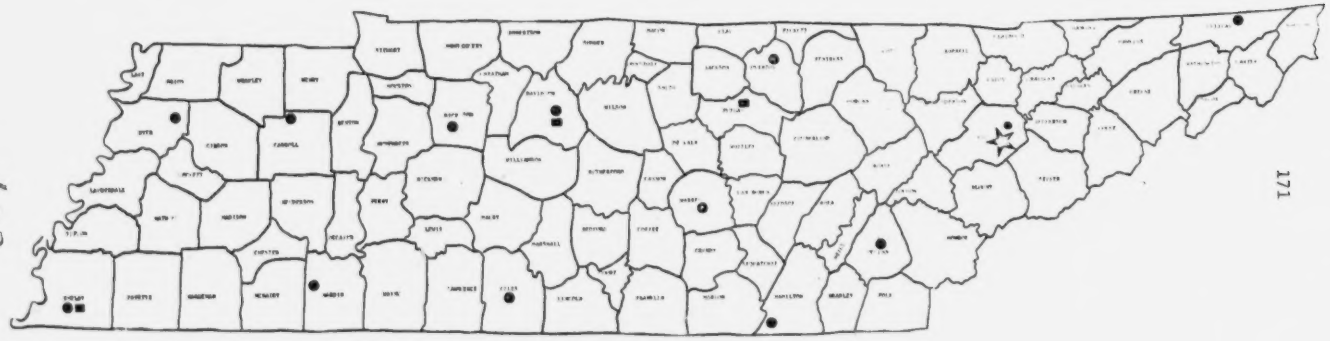
TURN TO THE DESIRED ED NUMBER IN THE RIE RESUMÉS CATALOG FOR FULL CITATION, ABSTRACT, AND AVAILABILITY OF DOCUMENT

4 COMPLETE DOCUMENTS

REQUEST DOCUMENTS BY ED NUMBER (ED-000000)

Transparency No. 6

AVAILABLE MICROFICHE COLLECTIONS AND READER-PRINTERS



✡TENNESSEE RESEARCH COORDINATING UNIT

-EXISTING MICROFICHE COLLECTIONS

•REGIONAL RESOURCE CENTERS

NASHVILLE STATE TECHNICAL INSTITUTE

DEFINING THE OCCUPATION OF A PROGRAMMER

IN ACTUAL PRACTICE PROGRAMMERS PERFORM DUTIES IN EACH ITEM OF THE FOLLOWING OUTLINE.
*(THE USUAL CONCEPT OF PROGRAMMING INCLUDES ONLY THESE ITEMS)

OUTLINE FOR THE TOTAL PROGRAMMING (SOFTWARE SYSTEM-BUILDING) PROCESS

I. PROBLEM RECOGNITION

A. IDENTIFIES PROBLEM AND FORMULATES OBJECTIVES
B. ANALYSIS AND FIRST TENTATIVE DESIGN
*C. DESIGN SYSTEM FORM, METHODS, AND COMPLETE SPECIFICATIONS
*D. CORRECTION OF TRANSLATION PROCESS ERRORS
*E. IMPLEMENTATION AND SYSTEM ACCEPTANCE

II. ACCEPTANCE OF WORKING SYSTEM

A. INSTALLATION AND ADAPTATION OF SYSTEM TO ENVIRONMENT
B. COMPLETELY OPERATIONAL SYSTEM WITH CHECKS AND BALANCES
C. MAINTENANCE OF SYSTEM
D. EFFICIENCY CORRECTIONS, IMPROVEMENTS, MODIFICATIONS
E. RECORDS PROCEDURES AND DECISIONS IN A PROCEDURE MANUAL

III. OBSOLESCENCE

RECORD RETENTION AND/OR DESTRUCTION

DEFINITION OF PROGRAMMING

THE ART OF REDUCING THE PLAN FOR THE SOLUTION OF A PROBLEM TO MACHINE SENSIBLE INSTRUCTIONS, IN COMPUTING, THE ART OF TELLING A COMPUTER WHAT TO DO AND HOW TO DO IT.

NASHVILLE STATE TECHNICAL INSTITUTE

SELECTED JOB DESCRIPTIONS

COMPUTER PROGRAMMER--SENIOR

CAPABLE OF GENERATING AND MAINTAINING SOPHISTICATED OPERATING SYSTEMS PROGRAMS. HAS THOROUGH KNOWLEDGE OF BOTH HARDWARE AND SOFTWARE SYSTEMS. IS CAPABLE OF WRITING USER ROUTINES TO MODIFY OR EXTEND CAPABILITIES OF STANDARD PROGRAMMING SYSTEMS. MUST BE SELF-SUFFICIENT IN ALL ASPECTS OF JOB PERFORMANCE. DIRECTS OTHERS IN PERFORMANCE OF THEIR WORK. MUST HAVE DEMONSTRATED OUTSTANDING PERFORMANCE AS A COMPUTER PROGRAMMER--ADVANCED.

COMPUTER PROGRAMMER--ADVANCED

CAPABLE OF DEVELOPING AND IMPLEMENTING SOUND COMPUTER-BASED APPLICATIONS FOR ALL DEPARTMENTS WITHIN THE ORGANIZATIONS. CAPABLE OF MAINTAINING EXISTING COMPUTER PROGRAMS. HAS THOROUGH KNOWLEDGE OF PROGRAMMING SYSTEMS AVAILABLE FOR CURRENTLY INSTALLED SYSTEMS. MUST BE SELF-SUFFICIENT IN ALL ASPECTS OF JOB PERFORMANCE. OCCASIONALLY DIRECTS OTHERS IN PERFORMANCE OF THEIR WORK. MUST HAVE DEMONSTRATED OUTSTANDING PERFORMANCE AS A COMPUTER PROGRAMMER--EXPERIENCED OR COMPUTER PROGRAMMER--COLLEGE, TECHNICAL.

COMPUTER PROGRAMMER--EXPERIENCED

MUST HAVE DEMONSTRATED ABILITY IN PREPARING PROGRAMS, FLOWCHARTS, DOCUMENTATION AND OPERATOR INSTRUCTIONS FOR A MAJOR APPLICATION. MUST HAVE CONVERTED AND IMPLEMENTED A MAJOR APPLICATION SUCCESSFULLY. HAS DEMONSTRATED ABILITY TO WORK EFFECTIVELY WITH ALL LEVELS OF PERSONNEL. GENERALLY WORKS ON A SELF-SUFFICIENT BASIS WITH OCCASIONAL GUIDANCE AND ASSISTANCE FROM MORE SENIOR AND EXPERIENCED PROGRAMMERS. MUST HAVE DEMONSTRATED SATISFACTORY PERFORMANCE AS A BEGINNING PROGRAMMER IN ANY AVAILABLE JOB CATEGORY.

COMPUTER PROGRAMMER--BEGINNING, COLLEGE, TECHNICAL

MUST HAVE BS OR BA IN MATHEMATICS, STATISTICS, ECONOMIC ANALYSIS, INDUSTRIAL ENGINEERING OR RELATED DEGREES. MUST SCORE 60 OR ABOVE ON THE IBM PROGRAMMING APTITUDE TEST. MUST BE CAPABLE OF PROGRESSING IN AT LEAST ONE AREA OF THE OPERATION.

COMPUTER PROGRAMMER--BEGINNING, COLLEGE, NON-TECHNICAL

MUST HAVE BS OR BA IN NON-TECHNICAL COURSE OR STUDY, PREFERABLY BUSINESS, MANAGEMENT, FINANCE, MONEY AND BANKING OR SUCH RELATED DEGREE & MUST SCORE 60 OR ABOVE ON IBM PROGRAMMING APTITUDE TEST. MUST BE CAPABLE OF PROGRESSING IN AT LEAST ONE AREA OF THE OPERATION.

COMPUTER PROGRAMMER--BEGINNING, NON-COLLEGE, TRAINED

HAS COMPLETED A RECOGNIZED COURSE OF COMPUTER INSTRUCTION THAT INCLUDES PROGRAMMING, FLOWCHARTING, DOCUMENTATION, JOB TIMING, BASIC PROCEDURES AND CONSOLE OPERATION ON SYSTEM WITH CPU, READER, PUNCH, PRINTER, MAGNETIC TAPE AND/OR MAGNETIC DISK. HAS SCORED 60 OR ABOVE ON THE IBM PROGRAMMER APTITUDE TEST.

OPERATIONS SHIFT SUPERVISOR

SUPERVISES, TRAINS AND DIRECTS ADVANCED AND BEGINNING COMPUTER OPERATORS IN THE PERFORMANCE OF THEIR WORK. CAPABLE OF OPERATING ALL INSTALLED COMPUTER EQUIPMENT ON ALL DATA PROCESSING JOBS. ASSURES THAT ALL WORK AVAILABLE IS PROCESSED ON AN EFFICIENT AND TIMELY SCHEDULE. ASSURES THAT ALL COMPLETED WORK IS PROPERLY BALANCED TO CONTROLS AND PROPERLY DISTRIBUTED TO SCHEDULED RECIPIENTS. ASSURES THAT ALL EQUIPMENT IS IN PROPER OPERATING CONDITION.

COMPUTER OPERATOR--ADVANCED

CAPABLE OF OPERATING ALL INSTALLED COMPUTER EQUIPMENT ON ALL DATA PROCESSING JOBS. WORKS ON A SELF-DIRECTED BASIS. ASSUMES FULL RESPONSIBILITY FOR ASSIGNED OPERATIONS. RESOLVES ALL PROBLEMS RELATED TO HIS WORK. OCCASIONALLY DIRECTS THE WORK AND TRAINING OF LESS EXPERIENCED OPERATORS AS DIRECTED BY THE SHIFT SUPERVISOR.

COMPUTER OPERATOR--BEGINNING

HAS EXPRESSED AN INTEREST IN THIS TYPE OF WORK. HAS SCORED 50 OR ABOVE ON THE IBM PROGRAMMER APTITUDE TEST. PREFERABLY HAS TRAINING OR EXPERIENCE OR COMPUTER EQUIPMENT OR RELATED EQUIPMENT.

SYSTEM DESIGN ANALYST

POSSESSES WIDE BACKGROUND OF BUSINESS TRAINING OR EXPERIENCE IN MOST MAJOR BUSINESS APPLICATIONS. HAS ADVANCED KNOWLEDGE OF ACCOUNTING AND/OR DATA PROCESSING ACCOUNTING APPLICATIONS. IS CAPABLE OF DOCUMENTING EXISTING SYSTEM, ANALYZING SYSTEM REQUIREMENTS AND DESIGNING NEW OR REVISED SYSTEM TO BEST MEET THE REQUIREMENTS. MUST BE SELF-SUFFICIENT IN ALL ASPECTS OF JOB PERFORMANCE. DIRECTS THE ACTIVITIES OF OTHERS IN DATA GATHERING, ANALYSIS PREPARATION AND IMPLEMENTATION OF NEW OR REVISED SYSTEM. CONSULTS WITH KEY MANAGEMENT PEOPLE TO DETERMINE FEASIBILITY OF NEW PROJECTS.

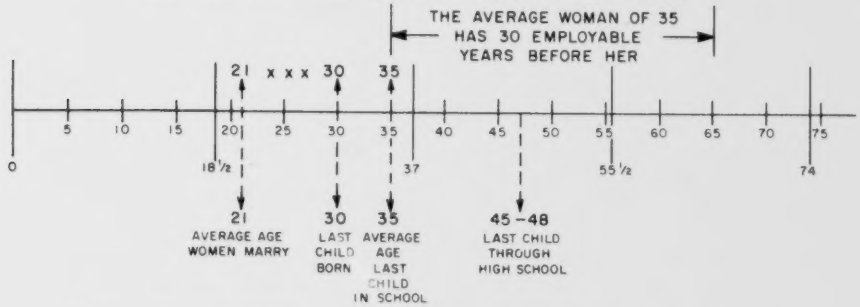
Planning Your Lifeline

The SPAN PLAN Chart was devised by the office of the Dean of Women at Purdue University to assist women students to think seriously about their long-term plans and to diagram on a Lifeline Chart what she would like her own life pattern to be in terms of education, career, marriage and family. Until recently, "...and she was married and lived happily ever afterward" has signaled the accomplishment of a woman's life goals and the end of any necessity to plan further. From that point, somewhere in her early twenties, she just "went along" with whatever came up. But the patterns of women's lives have been changing.

This chart can help YOU make education, marriage and career plans for your full lifespan--all 74 years of it. How does your anticipated lifeline compare with that of the average American woman today?

SPAN PLAN CHART

AN AVERAGE AMERICAN WOMAN'S LIFELINE



TODAY: The life expectancy of a girl born in 1964 is 74 years; in 1920 it was 55 years;
9 out of 10 girls will work sometime during their lives; they are likely to work at least 25 years outside their home;
Over 5 million students are enrolled in American colleges and universities; 2,621,000, or 40%, are women;
In 1968, 42% of all women were in the labor force; in 1920 only 23% were working

NEW PATTERNS OF WOMEN'S LIVES: THE AVERAGE AMERICAN WOMAN IN 1970

LIFE PATTERNS OF MODERN WOMEN INCLUDE:

School

Work and/or Marriage

Raising a family (and increasingly continuing to work by choice or necessity)

Return to work when youngest child is in school

(This Span Plan Chart information is provided by courtesy of the Office of the Dean of Women, Purdue University, Lafayette, Indiana 47907.)

THE SIGNIFICANT FACTS

21 ... Average age women marry (about half of today's women are married by age 21)
3.3... Average number of children
30 ... Average age last child born
35 ... Average age last child in school
45-48. Last child through high school
Average woman worker is age 39 and married
30 million women (2 out of 5 workers) are in labor force
3 out of 5 working women are married and living with their husbands
Prediction is made that by 1980, 36 million women will be in the labor force

U.S. DEPARTMENT OF LABOR
WAGE AND LABOR STANDARDS ADMINISTRATION
WOMEN'S BUREAU
WASHINGTON, D.C. 20210

PROFILE OF THE WOMAN WORKER
50 Years of Progress

NOW	1920
AGE	
39 years old.	28 years old.
MARITAL STATUS	
Married and living with her husband.	Single.
OCCUPATION	
Most likely to be a clerical worker.	Most likely to be a factory worker or other operative.
Many other women in service work outside the home, factory or other operative work, and professional or technical work.	Other large numbers of women in clerical, private household, and farm work.
About 500 individual occupations open to her.	Occupational choice extremely limited.
EDUCATIONAL ATTAINMENT	
High school graduate with some college or post-secondary-school education.	Only 1 out of 5 17-year-olds in the population a high school graduate.
LABOR FORCE PARTICIPATION	
Almost half (49 percent) of all women 18 to 64 years of age in the labor force.	Less than one-fourth (23 percent) of all women 20 to 64 years of age in the labor force.
Most apt to be working at age 20 to 24 (57 percent).	Most apt to be working at age 20 to 24 (38 percent).
Labor force participation rate dropping at age 25 and rising again at age 35 to a second peak of 54 percent at age 45 to 54.	Participation rate dropping at age 25, decreasing steadily, and only 18 percent at age 45 to 54.
Can expect to work 24 to 31 more years at age 35.	Less than 1 out of every 5 (18 percent) women 35 to 64 years of age in the labor force.

April 1970

WB 70-127

VT 016 569
AN ASSESSMENT OF WISCONSIN'S PROFESSIONAL PERSONNEL DEVELOPMENT PROGRAM FOR VOCATIONAL EDUCATION.

WISCONSIN UNIV., MADISON. DEPT. OF EDUCATIONAL ADMINISTRATION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 71 75P.

DESCRIPTORS - *VOCATIONAL EDUCATION; *PROFESSIONAL PERSONNEL; *MANPOWER DEVELOPMENT; *PROGRAM EVALUATION; *TEACHER EDUCATION; ENROLLMENT PROJECTIONS; MANPOWER NEEDS; TABLES (DATA); CAREER EDUCATION
IDENTIFIERS - WISCONSIN

ABSTRACT - PRESENTED IN THIS REPORT IS A DISCUSSION OF THE NEED FOR THE PROFESSIONAL DEVELOPMENT OF VOCATIONAL EDUCATION TEACHERS. IN ESTABLISHING THIS NEED FOR TEACHER EDUCATION PROGRAMS, MENTION IS MADE OF NEW STAFFING AND SCHEDULING ARRANGEMENTS, THE EFFECT OF CHANGING TECHNOLOGY ON TEACHER COMPETENCY, AND THE PREPARATION OF TEACHERS FOR STUDENTS WITH SPECIAL NEEDS. THE REPORT ALSO GIVES SPECIAL ATTENTION TO MANPOWER AND ENROLLMENT PROJECTIONS, PROFESSIONAL PERSONNEL REQUIREMENTS AND SOURCES, AND STATE PLAN PROVISIONS FOR PERSONNEL DEVELOPMENT. AMONG THE CONCLUSIONS OF THIS REPORT ARE: (1) EVIDENCE INDICATES THAT THERE WILL BE A CONTINUING DEMAND FOR VOCATIONAL TEACHERS AT BOTH THE POST-SECONDARY AND SECONDARY LEVELS, (2) THE PRACTICE OF RECRUITING POST-SECONDARY TEACHERS FROM BUSINESS AND INDUSTRY IS APPROPRIATE AND SHOULD CONTINUE, AND (3) THE INTERNSHIP PROVIDED THROUGH THE EDUCATION PROFESSIONS DEVELOPMENT ACT FUNDS IS HIGHLY COMMENDABLE. A MAJOR RECOMMENDATION IS THAT PRESERVICE PROGRAMS SHOULD CONTINUE TO BE DEVELOPED WITH PRATICULAR EMPHASIS ON WAYS OF PROVIDING TEACHERS FOR NEW AND EXPANDING OCCUPATIONAL AREAS. (JS)

VT 016 569

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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AN ASSESSMENT OF WISCONSIN'S PROFESSIONAL PERSONNEL DEVELOPMENT PROGRAM FOR VOCATIONAL EDUCATION

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Department of Educational Administration
University of Wisconsin

Conducted for the
Wisconsin Advisory Council on Vocational Education
by Cooperative Educational Research and Services,
Department of Educational Administration
University of Wisconsin

1971

STATE ADVISORY COUNCIL

Name	Category
JOHN N. KRAMER, Chairman Fennimore, Wisconsin	Representative of local educational agency.
MRS. WILLIAM A. NIELSEN, Vice Chairman West Bend, Wisconsin	Representative of School Boards.
FREDERICK BRONSON Milwaukee, Wisconsin	Representing state industrial and economic development agency.
WARREN BROWN Hartland, Wisconsin	Familiar with vocational needs and problems of management and labor.
MISS KATHRYN T. GILL Madison, Wisconsin	Person having special knowledge and experience who is not involved in administration of state or local vocational program.
MRS. EDWARD HAERTER New Berlin, Wisconsin	Representative of general public, knowledgeable about the poor and disadvantaged.
GEORGE HALL Green Bay, Wisconsin	Familiar with vocational needs and problems of management and labor.
RAYMOND O. JONDAHL Racine, Wisconsin	Familiar with vocational needs and problems of management and labor.
EDWIN KEHL Madison, Wisconsin	Representative of manpower and vocational education agencies in state and CAMPS.
NORMAN P. MITBY Madison, Wisconsin	Representative of community and junior colleges.
JOSEPH PELLEGRIN Germantown, Wisconsin	Familiar with vocational education programs including comprehensive secondary schools.
C. D. REJAHL Madison, Wisconsin	Familiar with administration of state and local vocation programs.
DR. ROBERT RUDIGER Menomonie, Wisconsin	Representative of community and junior colleges.
KEITH STOEHR Kenosha, Wisconsin	Representative of manpower and vocational agencies in state and CAMPS.
KENNETH SVEE Madison, Wisconsin	Person with special knowledge with respect to special educational needs of physically and mentally handicapped.
ROGER WAUKAU Neopit, Wisconsin	Representing school systems with large concentration of academically, socially, economically, and culturally disadvantaged students.
DR. BERNARD WEISS Milwaukee, Wisconsin	Representing school systems with large concentration of academically, socially, economically, and culturally disadvantaged students.

PREFACE

The challenge of preparing professional personnel for vocational education is perhaps greater at this time than at any other point in history. This fact grows out of the increasing expectations of vocational and technical education. Vocational educators can no longer rest with the mission of the past in which they were charged with providing occupational training in a relatively few occupational areas. Rather, they must accept the mission of the present day which spells out the need to prepare people for all occupations of less than baccalaureate level and further to serve the occupational education needs of all individuals. In addition, the cry is being heard to bring about changes in the whole educational system to make the curriculum more relevant to the occupational world where most individuals will of necessity have to find success in order to become economically sufficient. This suggests also a more adequate program of guidance and career orientation in order that both youth and adults will be better able to make realistic career choices.

These challenges suggest a system for preparing professional personnel which must be broader in scope than the system of the past, both in terms of occupational areas and of people to be served. It must be more flexible in that it should make provision for easy assimilation of personnel from the professions and from business and industry into the system.

The writer wishes to acknowledge the complete cooperation received from the Department of Public Instruction, the State Board of Vocational

and Technical Education, the Institutions of Higher Education and local vocational education personnel in providing data. Also, recognition should be given to Professor James Hoeh of the Department of Educational Administration and several graduate assistants who participated in various phases of data collection.

Merle E. Strong

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CHAPTER I

INTRODUCTION[1]

The adequate training of teachers for vocational education was seen as imperative to the success of vocational education programs by early leaders in the field. Although many accomplishments can be identified in contemporary vocational education programs, the problem of providing adequately trained teachers and other professional personnel remains among the most critical areas of consideration in the expansion of vocational and technical programs.

The problem has become more complex as the role of vocational education has been expanded. Early programs of vocational education, encouraged by the Smith-Hughes Act of 1917, were related to agriculture, home economics, and trade and industrial occupations. The role of vocational education was gradually expanded by succeeding federal legislation until the Vocational Education Act of 1963, which provided that training be made available for all occupations not requiring a baccalaureate degree and emphasized serving the occupational educational needs of all individuals. This emphasis implies the provision of a broader range of programs in terms of occupations and in terms of levels of instruction in order to accommodate the broad range of abilities and interests of youth and adults.

The Vocational Education Amendments of 1968 provided resources for a great expansion in vocational and technical programs and earmarked funds

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[1]For this introduction the author has drawn heavily from Merle E. Strong, "Training of Teachers," THE ENCYCLOPEDIA OF EDUCATION, 1971, Volume 9, pp. 480-486.

for the expansion of programs for particular groups such as the disadvantaged and the handicapped (until recently these groups were not considered a responsibility of vocational education). Legislation has also placed emphasis on several other program dimensions, including the occupational aspects of guidance and counseling, orientation to the world of work, occupation exploration, cooperative education, work-study programs, job placement, and follow-up.

It should be pointed out that the problem of providing vocational education teachers prior to 1965 was related primarily to the post-secondary level, since prior to the Vocational Education Act of 1963 little emphasis was placed on vocational education at the secondary level.

In response to the need for a more sophisticated labor force owing to expanding technology, the growth of vocational and technical programs at the post-high-school level, particularly in junior and community colleges, has been phenomenal. This growth will continue as the job market continues to require increasing numbers of the labor force to have training at this higher level. Vocational programs have also continued to serve large numbers of adults in need of retraining. This need has been magnified by the introduction of new materials, methods, and equipment into the job market.

The challenge of providing adequately trained teachers for vocational and technical education courses is very great because of the variety of occupations, levels, and types of institutions in which programs are offered and because of the range of abilities and ages of individuals to be served. The problem is compounded by the fact that teacher education programs of the traditional type have not always been appropriate for the kinds of teachers needed in vocational education.

Responsibility of State Boards

The basic vocational education legislation, the Smith-Hughes Act of 1917, which appropriated one million dollars annually for vocational teacher education is important not only as historical background but also because the act established a philosophy and a pattern of operation in vocational education and vocational teacher education which has persisted through the years. Each succeeding vocational education act up to and including the Vocational Education Amendments of 1968 reflected three basic principles that first appeared in the Smith-Hughes Act: first, that the state board must develop a plan to be approved at the federal level, a plan indicating the state's scheme for providing vocational education and including information on instructional personnel; second, that responsibility for the preparation of teachers and other vocational education personnel and the establishment of minimum qualifications are responsibilities of the state board; and third, that federal funds under each of the acts can be spent for teacher-training purposes.

Nature of Training

One of the strengths of vocational education has been its ability to keep open numerous sources of teachers. Full-time teachers of agriculture, home economics, and office occupations (business education) are prepared through baccalaureate programs. Full-time teachers in trade and industrial education, in contrast, are often recruited from the occupation for which training is to be given. The selection criteria for these teachers emphasize competence and success in the occupation rather than the completion of a degree. Teachers for health occupations usually are recruited from the occupations, in which case they have met the degree or other training

requirements of the occupations and hold licenses if such are required. In the case of teachers for highly technical occupations, emphasis is again placed on their success in the occupation. Typically, those recruited have had formal training appropriate for success in their field. This training might include a degree in engineering or an associate degree in a technical field. Often, however, these teachers have not had any courses related to learning theory or teaching methodology.

The challenge of teacher training is magnified by the large number of part-time teachers required, particularly in adult programs, which comprise as much as 50 percent of the vocational education enrollment. In addition, it has been the practice to staff adult programs with specialists recruited from business, industry, agriculture, health, and other related fields. Except for those who enter teaching with a degree in education, the initial thrust of teacher training in vocational education is to provide teaching and other educational skills necessary to meet certification requirements and improve teaching efficiency.

In addition to recruiting teachers from many sources, a second important dimension of vocational teacher education is the upgrading of teachers in terms of the content and skills related to the particular occupations they are teaching. This dimension has become increasingly important as the rate of change in occupations reflects the accelerated rate of technological change.

The general education needs of regular teachers are also important for vocational teachers. Although many vocational teachers who are recruited lack baccalaureate or higher degrees, they are encouraged to complete degrees. As a result, the number of degrees held by vocational teachers who have been in the field a number of years compares favorably with those of teachers in other fields.

Vocational Categories

Teachers of vocational education are usually identified by the service area of their competency--for example, agriculture, distributive occupations, or health occupations. In the writing and implementation of the Smith-Hughes Act of 1917, the early leaders in vocational education sensed an inadequacy in the structure and methods of the training programs of that day and emphasized several categories of vocational teachers, while the states developed certification requirements by service area. Although modifications have been made, certification requirements and teacher education programs are for the most part identified according to a service category.

Agricultural Occupations

Traditionally, all teachers in agriculture have come through the teacher education programs provided in the land-grant colleges. These programs are located within colleges or departments of agriculture and have strong ties to colleges or departments of education. Prior to the Vocational Education Act of 1963 instruction in agriculture was directed toward preparing youth and adults for production agriculture or toward upgrading their skills in this area. Typically, farm boys who had taken agriculture programs in high school were recruited for these programs.

The Vocational Education Act of 1963 brought new challenges to traditional programs. The task of preparing instructional personnel became more complicated than under previous legislation because the act broadened the responsibility to provide training to all persons, including the disadvantaged and handicapped, and for all occupations not considered to be professional. In addition to curriculum changes in college programs, opportunities are now being provided for cooperative experiences in business and industry.

Business and Office Occupations

Programs in the area of business and office occupations became eligible for federal support under the Vocational Education Act of 1963. The system of teacher education in business education at this time was similar to that in general education. Although at present these teachers continue to teach courses that enable youth to become employable, teacher education programs need to expand in order to provide instruction in a broader range of office occupations, including those related to data processing. Several states, in addition to making significant curriculum changes in teacher education programs, have made provisions for recruiting teachers from the business world, particularly for such programs as data processing in post-secondary institutions. Significant efforts have also been made in providing in-service activities for business-education teachers to upgrade their office-related skills.

Distributive Occupations

The Vocational Education Act of 1963 broadened the states' authority to provide preparatory programs in distributive education in addition to the cooperative programs between the schools and distributive businesses (both wholesale and retail) which had been provided previously. This act has made possible and encouraged an expansion in the size and number of distributive teacher education programs. In general, however, these programs appear to be understaffed and underdeveloped to meet the need for teachers in a field with a rapidly expanding labor force. Full-time teachers usually have been provided through baccalaureate programs, many of which are closely allied to departments of commerce in colleges. Part-time teachers have often been recruited from the business world.

Home Economics Occupations

The home economics teacher is prepared through the baccalaureate route. Prior to the Vocational Education Act of 1963, home economics programs were directed at developing students' abilities and understanding in the area of home and family life and at helping them to live as informed citizens. The 1963 act provided that new funds could be used only for employment training in occupations requiring knowledge and skills related to home economics (such jobs as waitress, homemaker aide, child-care aide, and hotel and motel keeper). It was the intent that these programs be added to rather than replace the traditional home economics program. The development of new programs has undoubtedly been hampered by the lack of teachers with appropriate experience and training to develop and teach courses in occupations related to home economics.

Health Occupations

Teacher education for the health occupations was provided in the past primarily as a part of trade and industrial teacher education. Potential teachers were recruited from the various health occupations--for example, registered nurses for practical nurse training programs and dental hygienists and dental assistants for dental assistance programs. The Health Amendments Act of 1956 provided for expanded training in health occupations. These amendments were administered as Title III of the George-Barden Act of 1946, and succeeding vocational education acts have given rise to additional program expansions. Several states are developing teacher education programs specifically geared to the needs of the health occupation teacher.

Technical Occupations

Technical education programs are provided mainly at the post-high school level in junior and community colleges, technical institutes, and other post-secondary institutions. In order to staff these programs, it has been necessary to compete directly with business and industry. Nearly all technical areas of occupational preparation are becoming more specialized, with workers in business and industry requiring training in depth. The challenge to educators is to recruit and retain teachers with depth, breadth, and currency of experience in the technology to be taught as well as with teaching skills. Such a challenge dictates close cooperation with business and industry.

The practice has been to recruit persons from business and industry who have demonstrated competence in the technology and to provide them with the teaching skills through in-service programs. However, this practice does not solve the problem of keeping these teachers current with the technology in their fields. Successful solutions to this problem have included short-term workshops and institutes, often in cooperation with an industry, trade, or professional association or supplier; university courses related to the technology; and return to business and industry for additional experience.

Trade and Industrial Occupations

The traditional approach to securing teachers in trade and industrial occupations has been to recruit skilled craftsmen and then to provide them with general education teaching skills on an in-service basis. One limitation of this method has been that teachers' salaries have not been competitive (particularly at the secondary school level) with the earnings

of well-qualified craftsmen. In addition, there has been increased concern on the part of many school administrators that a degree should be at least one of the qualifications for teaching. A number of approaches have been developed which attempt to recruit persons who have already developed some occupational competence into baccalaureate programs. The problem remains that if a person is well qualified in an occupational area, the school must still be competitive with industry to retain his services.

Implications of the 1968 Amendments

The Vocational Education Amendments of 1968 have been funded and have substantially increased support for vocational and technical education. The need to extend vocational and technical education opportunities exists in every state. It does not, therefore, seem unreasonable to expect that state and local resources will be made available far in excess of funds needed to meet the matching requirements of the Vocational Education Amendments of 1968. The Division of Vocational and Technical Education (U.S. Department . . . 1969) has predicted an enrollment of 14 million in vocational education programs by 1975, which is almost double the 1968 enrollment. This increase will require nearly a doubling of the number of professional personnel.

The task of preparing instructional personnel will be complicated by some of the new categories of personnel and programs identified in the act and by several other factors which will affect all areas of education. First among these other factors is education technology, which is developing at a rapid rate. Sophisticated equipment is already available that greatly increases learning efficiency. The real challenge to education is to identify and develop educational content appropriate to the many occupational areas and to program that content for use with appropriate instructional media.

Included in the newer media and methods is the expanded use of programmed material on an individual basis, which involves not only wider use of programmed texts but also the combination of these texts with other media, such as audiotapes, slides, and filmstrips. Electronic student-response systems will become more widely used, as will closed-circuit television. The computer has already been proved to be an appropriate tool for teaching and learning, and its extensive use should prove financially feasible by the end of the 1980's, if not sooner. The greatest potential limitation to its effective use may be the lack of capability to properly organize and adapt the content for use with this new media.

New staffing and scheduling arrangements will also affect the requirements for the training of educational personnel. The concept that all teaching personnel should be equally competent and the resulting practice of assigning classes of approximately equal size to each teacher is giving way to a differentiated staffing pattern, with teaching teams that include paraprofessionals. Students are being taught in groups of varying size, depending upon the content and media used.

Perhaps the greatest challenge to educators, particularly vocational educators, is keeping teachers abreast of the rapid changes in technology in their fields. New products, materials, equipment, and methods can make occupational skills partially obsolete unless ways are found to update experience.

The Vocational Education Amendments of 1968 identified several aspects either new to vocational and technical education or requiring expansion that will involve new dimensions in teacher preparation. Among these aspects is the provision of occupational guidance, orientation to the world of work, and exploratory occupational experiences at the elementary, middle school, junior high, and high school levels.

Another area of challenge for vocational teacher education is the preparation of teachers for students with special needs. Among such students are those with academic, socioeconomic, and physical handicaps. The serving of these students, until recently, was not necessarily considered as a part of the role of vocational education. The Vocational Education Amendments of 1968 allocated significant amounts of money for programs to serve these groups. It has been projected that by 1975 more than 4,000 teachers will be needed (in addition to those already teaching) with the necessary vocational competence and special training to work successfully with handicapped students (U.S. Department . . . 1969).

The act also emphasized the need to expand cooperative and work-study programs. This expansion will create the need for staffs with the knowledge and skills to coordinate programs with business and industry. The expansion of the school into the community to a greater degree than at present will certainly require new talents and working relationships.

Other aspects of the program envisioned by the Vocational Education Amendments of 1968 include expansion of programs in occupations related to home economics and consumer education. The amendments encouraged home economics educators to give greater consideration to social and cultural conditions and needs, especially in economically depressed areas. This direction will require new emphasis in teacher education programs in homemaking.

The 1968 amendments also stressed the need to serve youth in urban areas and made provision for residential demonstration schools. These residential schools are to be designed for those young people from central city areas and rural poverty areas who can best be served by being removed from their environment. The schools envisage a full range of health,

guidance, and counseling services in addition to providing occupational skills. Staffs for such schools need to have new and different talents than those required of the more traditional staffs.

Career Education

Recently the U.S. Office of Education has given substantial support to changing the focus of all education K-12 to make it more career-oriented, the rationale being that our present college-oriented curriculum fails to meet the needs of a large majority of students. This movement goes far beyond the scope of what was traditionally called vocational education; however, there seems little doubt that vocational educators should and will have the opportunity and the responsibility to provide assistance and direction for this new program.

The program envisions including concepts of work and occupations beginning with the elementary school level. These concepts would be built upon in the upper elementary levels with exploratory experience being included at the middle and junior high school levels. At the high school level further exploratory experience would be provided with the opportunity for education in preparation for a specific job or cluster of jobs during the last year or two in school.

The overall program objective might be thought of as "providing preparation for each individual for a satisfactory next step into the work world and/or further education." Substantial federal funds are being directed toward developing and demonstrating these types of programs. It is too early to tell what the impact will be on Wisconsin's program or specifically the demands which will be placed on teacher education as a result of this new emphasis.

CHAPTER II

MANPOWER AND ENROLLMENT PROJECTIONS

It is not the purpose of this report to develop new manpower projections or to even treat existing projections in any detail. However, in order to adequately plan vocational-technical training programs and estimate the financial, facility, and personnel requirements to meet future manpower needs, projections are needed to identify changing manpower requirements. The importance of the best possible projections cannot be overemphasized. To the extent that vocational education accurately reflects the changing character of manpower needs, imbalances between manpower requirements and labor supply can be reduced, the productivity of the economy and the earning power of workers enhanced, and the structural unemployment minimized.

Manpower Requirements

The vocational and technical education systems in Wisconsin are dedicated to meeting both the needs of individuals and the needs of employers. Theoretically, these two objectives should be quite compatible since for most individuals a job is essential; however, it is often necessary to meet the vocational education needs of some individuals in geographical areas in which employment may be quite limited. To not do this would contribute to individuals either remaining in poverty at home or lacking the skill to compete for jobs in relocating in an area in which employment is available.

The estimating of labor market requirements at best is a very difficult task because of changes in economic conditions, the changes in technology and the flexibility in our manpower requirements which leads to changes in job descriptions and substitutions of labor. In spite of these problems estimates must be attempted as a basis for program development.

Table 1 is presented to depict the twenty largest projected growth industries in Wisconsin from 1968-1975. This table clearly shows that the greatest projected growth will occur in health, service and government industries. These 20 industries are projected to generate a need for an additional 92,300 workers during the seven year interval between 1968 and 1975. Staff of the State Board of Vocational, Technical and Adult Education have attempted to translate labor force requirements to educational requirements which are shown in Table 2. It is obvious that such a translation can provide only a general picture of projected training needs because within each category are included many occupations.

Enrollment Projections

It is quite obvious that teacher and other professional personnel needs for Wisconsin's vocational education programs must be based on program projections. The manpower demand is only one factor that must be considered in making realistic enrollment projections. Among other considerations is the size of the population to be served, the expected demand and the financial and other resources that are anticipated to be available.

TABLE 1

TWENTY LARGEST PROJECTED GROWTH INDUSTRIES
1968-1975

RANK	INDUSTRY	PROJECTED 1968-1975 GROWTH
1	Medical & Other Health Services	40,300
2	General Merchandising (Retail)	19,200
3	Educational Services (Includes State & Local Gov.)	16,100
4	Miscellaneous Business Services	13,600
5	Local Public Administration	8,800
6	Contract Construction	8,600
7	Bank and Credit Agencies	7,200
8	Miscellaneous Retail Stores	5,600
9	Electrical Machinery Equipment & Supplies (Manufacturing)	5,600
10	Miscellaneous Plastics Products (Manufacturing)	5,300
11	Food Stores	4,800
12	Nonprofit Welfare and Religious Organizations	4,400
13	Hotels and Other Lodging Places	3,700
14	Eating and Drinking Places	3,400
15	Miscellaneous Machinery Manufacturing	3,000
16	Farm Machinery and Equipment (Manufacturing)	2,800
17	Auto Dealers and Gas Stations	2,700
18	Other Personal Services	2,600
19	State Public Administration	2,400
20	Other Repair Services	2,200

Source: Wisconsin State Employment Service, Wisconsin Manpower Projections; 1960-1968-1975, April 1970.

TABLE 2

EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS

LABOR DEMAND AND SUPPLY SUMMARY

State Wisconsin

Fiscal Year Ending June 30, 1972

OE Code	Instructional Program	Current Employment 1970	Projected Expansion and Replacement Needs 1972	Projected Expansion and Replacement Needs 1976	Projected Labor Supply Vocational Education Output 1972	Projected Labor Supply Vocational Education Output 1976	Projected Labor Supply Other Sectors Output 1972	Projected Labor Supply Other Sectors Output 1976
01.0000	Agriculture	136,223	(1,087)*	(43,838)*	18,436	19,595	--	--
04.0000	Distributive Education	153,142	3,378	15,953	4,614	7,424	84	100
07.0000	Health Occupations	34,011	751	14,134	2,385	3,163	20	31
09.0000	Home Economics	24,039	531	451	445	853	--	--
14.0000	Office Occupation	274,584	6,060	36,989	22,629	30,934	1,110	1,360
16.0000	Technical Education	28,313	625	9,453	1,328	1,615	110	130
17.0000	Trade and Industry	703,020	16,516	34,341	11,570	15,663	1,440	1,720
Other		427,368	12,526	52,326	--	--	230	280
	Total	1,780,700	40,387	163,647	61,407**	79,247	2,994	3,621

* Reduction of manpower demand.

** Fifty percent of secondary and 90% of post-secondary output enter labor market following graduation.

Source: 1972-1976 State Plan For Vocational Education In Wisconsin

Table 3 provides general population characteristics for Wisconsin. These were considered by the State Board in making enrollment projections. It is of interest to note the ratio of urban to rural population which has very definite implications for program development. Also, shown is the numbers in minority groups. While the percentages are small in comparison to other states, they should be recognized in program planning in terms of special programs or services which can be rendered.

Table 4 provides projections in program enrollments for Wisconsin through 1976. The growth expected is sizeable, for example at the secondary level an increase from 54,240 in 1972 to 71,100 in 1976.

It is also of interest to look at the projected growth by service category at both the post-secondary and secondary levels.

Table 5 provides projections for special types of programs and services. The personnel needs for these programs are often more challenging to acquire than for the more traditional kinds of programs. For example, very little is being done to prepare persons to provide salable skills to the disadvantaged or handicapped.

A dramatic growth in guidance programs is projected. This may represent only a fraction of the need, however, if extensive development of the career education concept discussed earlier should become broadly accepted.

Table 6 provides projections by degree programs. These projections show a growth of 22,000 students in the post-secondary system in a four year period. Past enrollment estimates have been on the conservative side. The writer would suggest that these figures may also prove to be conservative depending upon the ability of the vocational system to acquire the resources necessary to expand programs.

TABLE 3

GENERAL POPULATION CHARACTERISTICS USED IN DETERMINING VOCATIONAL EDUCATION NEEDS IN THE STATE OF WISCONSIN

	Latest Available Data 1970	Projections 1972	1976
1. General Population	4,417,731	4,480,000	4,650,000
Urban	2,910,877	2,956,800	3,069,000
Rural	1,506,854	1,524,000	1,581,000
White	4,258,959	4,318,720	4,482,600
Negro	128,224	129,920	134,850
Indian	18,924	19,174	19,902
Others*	11,624	12,186	12,648
a - Age Distribution			
Under 5 Years (Male & Female)	382,227	388,606	401,875
5 Years	86,940	87,908	91,340
6 "	90,287	91,490	95,060
7-9 "	283,957	287,916	298,930
10-13 "	381,807	387,672	402,460
14 "	92,371	93,732	97,285
15 "	91,605	92,736	96,355
16 "	88,012	89,652	92,635
17 "	86,437	87,360	90,775
18 "	87,815	88,804	92,170
19 "	79,284	80,192	83,335
20 "	73,971	74,816	77,755
21 "	68,508	69,540	72,175
22-24 "	194,619	197,220	204,800
25-34 "	506,447	513,608	533,590
35-44 "	470,246	476,872	495,260
45-54 "	475,931	482,696	501,305
55-59 "	215,918	218,824	227,220
60-61 "	79,518	80,292	83,335
62-64 "	108,966	110,308	114,490
65-74 "	284,070	288,264	299,095
75 and over "	188,795	191,492	198,755
Total	4,417,731	4,480,000	4,650,000

Source: 1972-1976 State Plan For Vocational Education In Wisconsin

TABLE 4

VOCATIONAL EDUCATION ENROLLMENT

Level of Program	1972	1973	1974	1975	1976
Secondary					
01 Agriculture	19,300	19,600	19,900	20,200	20,500
04 Distribution	4,000	4,700	5,400	6,100	6,800
07 Health	120	225	300	375	450
09 Home Economics	345	450	540	630	750
14 Office Education	20,875	21,325	24,460	26,600	29,300
16 Technical	-	-	-	-	-
17 Trade and Industry	9,600	9,600	10,400	11,895	13,300
Total (Grades 9-12)	54,240	55,900	61,000	65,800	71,100
Post Secondary OE Code					
01 Agriculture	505	540	568	597	620
04 Distribution	4,070	4,280	4,435	4,713	4,821
07 Health	3,028	3,178	3,342	3,512	3,648
09 Home Economics	467	490	515	542	563
14 Office	12,167	12,828	13,499	14,165	14,714
16 Technical	6,641	7,030	7,398	7,771	8,076
17 Trade and Industry	8,303	8,771	9,251	9,714	10,092
Apprenticeship	4,400	4,447	4,672	4,909	5,170
Adult	96,550	100,081	103,612	107,144	110,675
Total	136,131	141,645	147,292	153,067	158,379
Secondary and Post Secondary Total	190,371	197,545	208,292	218,867	229,479

Source: 1972-1976 State Plan for Vocational Education in Wisconsin

TABLE 5

ENROLLMENT PROJECTIONS FOR SPECIAL PROGRAMS

	1972	1973	1974	1975	1976
Disadvantaged - Total	70,100	71,700	73,500	75,100	76,400
Secondary	15,000	16,500	18,000	19,500	21,000
Post-Secondary	11,000	11,400	12,000	12,600	13,400
Adult	44,100	43,800	43,500	43,000	42,000
Handicapped - Total	4,243	4,645	5,090	5,490	5,950
Secondary (9-12)	1,250	1,400	1,550	1,750	1,950
Post-Secondary	1,062	1,085	1,090	1,100	1,120
Adult	1,931	2,160	2,405	2,640	2,880
Cooperative Program - Total (Part G only)	4,149	4,238	5,449	5,832	6,980
Secondary	4,149	4,238	5,449	5,832	6,980
Post-Secondary	-	-	-	-	-
Group Guidance - Total	150,000	200,000	275,000	350,000	400,100
Secondary (Pre-vocational) Part B & D	150,000	200,000	275,000	350,000	400,100
Post-Secondary	-	-	-	-	-
Work Study - Total	650	750	825	900	1,000
Secondary	-	-	-	-	-
Post-Secondary	650	750	825	900	1,000
Consumer and Homemaking - Total	24,952	26,953	30,562	35,511	41,679
Secondary	13,200	14,700	17,800	22,200	27,800
Post-Secondary	230	270	300	350	400
Adult	11,522	11,983	12,462	12,961	13,479

Source: 1972-1976 State Plan for Vocational Education in Wisconsin

TABLE 6

VOCATIONAL EDUCATION ENROLLMENT BY DEGREE PROGRAMS

Post Secondary	1972	1973	1974	1975	1976
1 yr. Vocational Diploma	9,895	10,394	10,925	11,481	11,926
2 yr. Vocational Diploma	2,711	2,911	3,059	3,214	3,341
Associate Degree	17,080	17,865	18,770	19,748	20,512
Apprenticeship	4,750	4,989	5,245	5,510	5,724
Adult	96,550	100,081	103,612	107,144	110,675
Total	130,986	136,240	141,611	147,097	152,178
College Transfer	5,145	5,405	5,681	5,970	6,201
Post Secondary Total	136,131	141,645	147,292	153,067	158,379

Source: 1972-1976 State Plan for Vocational Education in Wisconsin

Summary

In this part of the report, labor force projections have been discussed briefly as a part of the rationale for increased program projections. Program projections as developed by the Department of Public Instruction and the State Board of Vocational, Technical Education have been shown, also. The next section will attempt to relate this information to professional personnel requirements.

CHAPTER III

PROFESSIONAL PERSONNEL REQUIREMENTS AND SOURCES

While a number of sources and estimates of professional personnel were identified and considered in the development of this report, only the projections completed recently by the State Board of Vocational, Technical and Adult Education are included. These projections are based on the most recent program projections cited earlier.

Table 7 provides projections by type of program and by occupational category for personnel at both the secondary and post-secondary levels. It should be noted that the columns do not add to the totals apparently because the total represents an unduplicated count.

It is noted that the number of secondary teachers is projected to increase by 469 by the year 1976. Likewise, post-secondary teachers will increase by 430 for a like period of time. The number of teachers of adults will increase by 695.

Table 8 provides information on the numbers of secondary teachers and new positions projected for 1976.

Table 9 provides similar information for post-secondary vocational teachers. It should be noted that the figures in Tables 8 and 9 do not include numbers of teachers needed for replacement.

Table 10 includes information and projections for adult education teachers. Practically all of these teachers are part-time teachers being recruited from business and industry or from other teaching positions to teach adult classes. The teacher education problem for this group is essentially one of inservice education.

TABLE 7

NUMBER OF TEACHERS IN VOCATIONAL EDUCATION PROGRAMS

Vocational Programs	Level of Program 1972			1973			1974			1975			1976		
	S*	PS	A	S*	PS	A	S*	PS	A	S*	PS	A	S*	PS	A
Total Number of Teachers (Unduplicated)	1064	1800	2290	1144	1895	2450	1242	1998	2595	1355	2050	2809	1533	2230	2985
Special Programs:															
Exemplary	2			3			3			3			3		
Group Guidance (Prevocational)	75			85			90			95			100		
Pre Postsecondary	-			-			-			-			-		
Remedial (Basic Education)	-			-			-			-			-		
Cooperative Part G	65			70			75			78			80		
Disadvantaged	225			235			240			245			250		
Handicapped	20			24			27			30			30		
Other 1/															
Occupational Programs: (Specify by OE Code)															
01. Agriculture	280	24	45	281	25	46	283	26	47	285	27	49	285	29	50
04. Distributive Education	68	133	215	78	141	220	83	147	230	98	155	250	108	161	260
07. Health Occupations	8	252	105	15	265	110	20	278	120	25	294	135	30	304	145
09.01 Home Economics	140	42	100	155	45		180	47	215	215	49	275	300	51	300
09.02 Home Economics	23			30			36			42			50		
14. Office Occupations	275	684	915	290	718	950	310	755	975	335	794	1020	360	824	1050
16. Technical Education	-	338	135	-	355	138		373	140	-	392	150		407	155
17. Trade & Industry	270	396	980	295	415	1020	325	437	1028	355	459	1080	400	471	1100
Other (Specify)															

S - Secondary; PS - Postsecondary; A - Adult

* Include in ( ) number of elementary teachers.

1/ Other types of vocational education personnel, such as aides and other personnel involved in the conduct of State Plan programs.

Source:

Source: 1972-1976 State Plan for Vocational Education in Wisconsin

TABLE 8

TOTAL NUMBER OF TEACHERS AND NEW POSITIONS PROJECTED
FOR SECONDARY PROGRAMS TO 1976

Occupational Area	No. of Teachers 1972	No. of Teachers 1976	Increase
Agriculture	280	285	5
Distributive Education	68	108	40
Health Occupations	8	30	22
Home Economics	163	350	187
Office Occupations	275	360	85
Trade and Industrial	270	400	130
TOTALS	1064	1533	469

TABLE 9

TOTAL NUMBER OF TEACHERS AND NEW POSITIONS PROJECTED
FOR POST-SECONDARY PROGRAMS TO 1976

Occupational Area	No. of Teachers 1972	No. of Teachers 1976	Increase
Agriculture	24	29	5
Distributive Education	133	161	28
Health Occupations	252	304	52
Home Economics	42	51	9
Office Occupations	684	824	140
Technical Education	338	407	69
Trade and Industry	396	471	75
TOTALS	1869	2247	378

TABLE 10

TOTAL NUMBER OF TEACHERS AND NEW POSITIONS PROJECTED
FOR TEACHERS OF ADULTS TO 1976

Occupational Area	No. of Teachers 1972	No. of Teachers 1976	New Positions
Agriculture	45	50	5
Distributive Education	215	260	45
Health Occupations	105	145	40
Home Economics	100	300	200
Office Occupations	915	1050	135
Technical Education	135	155	20
Trade and Industry	980	1100	120
TOTALS	2495	3060	565

One of the difficult problems in planning for a supply of vocational and technical teachers is the fact that it is difficult to predict the specific occupational area for which teachers will be needed. For example, in the category of health occupations, the projected needs not only may include instructors with nursing background but dental hygienists, medical laboratory assistants, etc. The range of specific occupational backgrounds required is even greater under the classification of trade and industry.

Another problem in predicting preservice teacher education needs is the fact that teachers for vocational and technical education are recruited from a number of sources other than directly from teacher education programs. This is highly desirable if programs are to reflect the needs of the occupation and employers.

Gibbs[1] in a 1969 study of post-secondary vocational and technical education, looked at sources of teachers. Table 11 lists the four most frequented sources of vocational teachers as identified by Gibbs. In rank order these sources were: persons employed in business and industry, general academic teachers and administrators in public school systems, students in teacher education programs in colleges, and teachers of vocational subjects in high schools.

TABLE 11

TEACHER SOURCES

Source	Number	Percent
Business and Industry	343	32.85
Student in teacher education program	164	15.71
Student in nonteacher education program	34	3.26
Teacher of vocational subject in high school	142	13.60
General academic teachers and administrators in public school	166	15.90
Teachers in another voc-tech system	24	2.30
Military personnel and civilians teaching therein	35	3.35
Teachers in college or junior college	50	4.79
Teacher, student or practicing nurse	57	5.46
Housewife or unemployed	29	2.78
TOTAL	1044	100.00

[1]Jeffrey L. Gibbs, "The Education, Source and Recruitment of Wisconsin Vocational-Technical Teachers," (University of Wisconsin, Master's Thesis), 1969.

Gibbs classified those teachers who came from business and industry and found that 85 percent of them were from four industries: the manufacturing (41 percent), the service industry (24 percent), the wholesale industry and retail trade industry (11 percent) and the construction industry (9 percent).

Gibbs noted that vocational teachers recruited from business and industry had spent approximately nine years in their occupation prior to the time they entered teaching. It was found also that these teachers accepted slightly less money upon entering teaching. In total, 70 percent of the teachers indicated that they accepted the same or less monetary reward. This tendency was found to exist in all areas of vocational-technical education.

Gibbs discovered that teachers consistently have averaged approximately 34 years of age at the time of recruitment. Table 12 identifies recruitment age of vocational teachers by their source.

The relatively high average recruitment age indicates that almost all vocational teachers were engaged in other activities either after or during their schooling before entering the vocational system. This information substantiated one of Gibbs' earlier findings, that on the average, Wisconsin post-secondary vocational teachers have had ten years of experience directly related to their assignment.

Vocational teacher source by curriculum area was also analyzed by Gibbs as reported in Table 13. His analysis disclosed that teachers who came from business and industry usually came from the manufacturing, service, and wholesale-retail trade industry. There has been no apparent trend in recruiting teachers from other industries. From Table 13, it is evident that the most common source for trade and industrial teachers was business and industry (55 percent); business and office teachers

TABLE 12

AGE AT RECRUITMENT
(N = 1023)

Source	Age
Business and Industry	36
Student in teacher education program	28
Student in nonteacher education program	28
Vocational teacher in high school system	34
General academic teacher or administrator in public school	35
Teacher in another vocational system	35
Military or civilian teacher in military	34
College and junior college teacher	37
Practice, student and teachers of nursing	40
Housewife or unemployed	37
AVERAGE AGE:	34

were primarily obtained from business and industry (34.62 percent); home economics teachers were primarily obtained from two sources, business and industry plus high school vocational programs (21.74 percent respectively); most agriculture teachers were obtained from school vocational programs (54.55 percent); distributive education teachers were primarily obtained from business and industry (43.75 percent); the majority of health occupations teachers eminated from nursing (59.49 percent); technical teachers were primarily obtained from business and industry (48.51 percent); and the majority of general academic teachers were obtained from high schools (45.50 percent).

An additional finding expressed in Table 13 notes that business and industry supplied about 33 percent of Wisconsin's post-secondary

TABLE 13

TEACHER SOURCES BY CURRICULUM AREA (Percent Across)

Curriculum Area	Bus. & Ind.	Teacher Educ.	Regular Educ.	Hi.Sch. Voca.	Hi.Sch. Aca.	Voca. System	Mili-tary	College Teacher	Nurs-ing	Housewife Unempl.	TOTAL
Trade and Industry	55.36	18.88	1.72	12.45	3.00	3.00	4.72	0.86	0.00	0.00	100.00
Business & Office	34.62	13.46	1.92	30.13	8.33	1.28	0.64	3.21	0.64	5.77	100.00
Home Economics	21.74	13.04	4.35	21.74	17.39	4.35	0.00	0.00	0.00	17.39	100.00
Agriculture	13.64	13.64	0.00	54.55	9.09	0.00	4.55	4.55	0.00	0.00	100.00
Distributive	43.75	25.00	12.50	9.38	3.13	0.00	3.13	3.13	0.00	0.00	100.00
Health	15.19	7.59	1.27	0.00	1.27	1.27	1.27	7.59	59.49	5.06	100.00
Technical	48.51	22.77	1.98	4.95	6.93	5.94	4.95	3.96	0.00	0.00	100.00
General Academic	18.50	13.00	6.50	2.50	45.50	0.00	1.00	10.00	0.00	3.00	100.00
Coord.-Supervisor	20.20	15.15	3.03	18.18	20.20	3.54	6.57	5.56	4.55	3.03	100.00
TOTAL AVERAGES:	32.85	15.71	3.26	13.60	15.90	2.30	3.35	4.79	5.46	2.78	100.00

Source: Jeffrey L. Gibbs, "The Education, Source and Recruitment of Wisconsin Vocational-Technical Teachers," (University of Wisconsin, Master's Thesis), 1969.

vocational-technical teachers. Both teacher education programs and high school academic programs supplied an additional 31 percent of these teachers. The fourth greatest contributor of teachers was vocational high school programs with 13 percent. Thus, these four sources accounted for approximately 77 percent of all vocational-technical teachers at the post-secondary level.

It is evident that because of the sources from which post-secondary teachers are recruited that it is difficult to relate needs directly to enrollments in pre-service programs. If one strongly believes that vocational programs should be closely tied to the needs of employers then it follows that it is highly desirable that a sizeable percentage of teachers be recruited directly from employment in the occupations for which they will be teaching.

Adequacy of Education

One section of this portion of the personnel study of post-secondary teachers focuses attention on: 1) an identification of the needs of teachers, 2) the adequacy of preservice training, and 3) the identification of inservice training priorities. The study team decided a questionnaire should be used to obtain the desired information.

The questionnaire design was patterned after one developed by Halfin and Courtney.[2] Items which comprised the "Staff Development Questionnaire" were obtained from the "Vocational Education Training Needs Study Instrument." The study population included a random selection

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[2]Harold H. Halfin and E. Wayne Courtney, "Competencies of Vocational Teachers," unpublished report sponsored by the Board of Regents of Wisconsin State Universities, May 1970.

of teachers employed at post-secondary vocational-technical schools throughout Wisconsin. These teachers represented the following disciplines:

a) Trade and Industrial Education

b) Business Education

c) Technical Education

d) Health and Welfare

e) Vocational Agriculture Education

f) Distributive Education

g) General Academic Subjects

A total of 185 questionnaires were mailed and, after a two-week period, a total of 74 (40 percent) of the questionnaires had been returned. Sixty-eight of the 74 returns were found usable and constituted the sample from which the analysis was made. Responses to questions I and II of the instrument were factor-analyzed to identify homogenous clusters. Of the 40 items used to describe proficiencies needed by vocational-technical teachers, 20 items obtained a mean score of 2.478 or better using a three point scale. Table 14 identifies mean scores for each of the 20 items.

A factor analysis of the 40-item questionnaire[3] grouped the 20 statements identified in Table 14 into six factors. The first factor contained items 33, 12 and 29. These items emphasized the development of tests to measure achievement. They also emphasized the use of technical terms. Factor two included item 17 which indicated a need to relate the daily lesson plan to the course of study.

The third factor, consisting of eight statements, contained items 9, 11, 36, 29 and 23, each with a mean score greater than 2.478. Analysis

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[3]For details of questionnaire, See Appendix A.

of these statements indicated a heavy emphasis placed on instructional materials and updating the course of study.

Items 38, 13 and 19 were also among those items listed in Table 14 and totaled 75 percent of the statements comprising factor forms. This factor suggested a need for proficiency in stimulating and motivating the student, thereby making his educational experiences more meaningful.

Factor five contained seven statements, five of which were listed in Table 14. Statement 3 suggested a needed proficiency in understanding the goals for vocational-technical education. The remaining statements 4, 5, 8 and 16 emphasized providing appropriate learning experiences by demonstrating skills used on the job and relating technological advances to laboratory instruction.

TABLE 14

MEAN SCORES OF RESPONDENTS DESCRIBING PROFICIENCIES NEEDED BY VOCATIONAL-TECHNICAL TEACHERS, BY ITEM NUMBER
(N = 68)

Item Number	Mean Score	Item Number	Mean Score	Item Number	Mean Score	Item Number	Mean Score
3	2.687	11	2.716	19	2.836	32	2.507
4	2.896	12	2.557	20	2.612	33	2.597
5	2.851	13	2.716	23	2.582	36	2.791
8	2.582	16	2.806	24	2.836	37	3.478
9	2.746	17	2.582	29	2.612	38	2.776

The final factor included items 37, 20, and 32, which the reader will recall were: the teacher providing vocational guidance information, using tools and equipment found on the job, and breaking the job into its component parts for instructional purposes. This mixture may be attributed

to the grouping of statements which did not relate to the aforementioned factors.

Results of the factor analysis conducted for Part I of the "Staff Development Questionnaire" and designed to identify proficiencies needed by teachers indicated that teachers of vocational and technical subjects need considerable proficiency in the ability to:

1) Develop tests which measure achievement;
2) Relate the daily lesson plan to the course of study;
3) Prepare instructional materials and update the course of study;
4) Stimulate and motivate the student;
5) Provide appropriate learning experiences in relation to a particular wage earning occupation.

Part II of the "Staff Development Questionnaire" asked respondents to identify the extent to which their formal education provided the proficiency reflected in each of the 40 statements. A four point rating scale was employed which allowed each respondent the opportunity to select the one which most closely approximated his experiences.

Table 15 identifies the mean response for the 68 persons who returned a properly completed survey for each of the 40 statements which comprised the questionnaire. Employing a true interval of 3.50-4.50 for a response of slight, 4.50-5.50 for a response of moderate, and 5.50-6.50 for a response of considerable, one can easily interpret the table.

The mean scores of the respondents indicated moderate preparation through formal education for 38 of the 40 statements contained in the questionnaire. Two statements (4, 17) obtained a mean score higher than 5.50. Thus, respondents as a group, rated "provide appropriate classroom learning experiences" and "relate the daily lesson plan to the course

of study" as two areas in which they received considerable proficiency through a formal education. It can be concluded, based on the population which responded to this study, that these teachers of vocational-technical subjects received considerable benefit from their formal education in two "considerable proficiency" skills.

TABLE 15

MEAN SCORES OF RESPONDENTS DESCRIBING THE ADEQUACY OF THEIR FORMAL EDUCATION BY ITEM NUMBER

Item Number	Mean Score	Item Number	Mean Score	Item Number	Mean Score	Item Number	Mean Score
1	4.824	11	5.132	21	5.015	31	4.853
2	4.735	12	5.176	22	5.5279	32	5.338
3	5.147	13	4.912	23	5.176	33	5.294
4	5.515	14	4.706	24	5.294	34	5.103
5	5.265	15	4.794	25	5.044	35	5.059
6	5.029	16	5.412	26	5.000	36	5.309
7	5.044	17	5.529	27	5.191	37	5.015
8	5.088	18	4.765	28	5.029	38	5.235
9	5.397	19	5.309	29	5.412	39	4.603
10	5.147	20	5.294	30	4.721	40	4.971

The recognition that proficiency relating to each of the 40 statements can not be provided by one source, i.e., institutions providing a formal education, led to Part III of the "Staff Development Questionnaire." Teachers who participated in the study reacted to each statement with a "yes" or "no" response when asked, "Should this proficiency be improved through staff development programs?"

An overwhelming response of "yes" was indicated for all 40 statements. Analysis of the write-in responses depicted a teacher interest in participating in staff development programs offered by industry.

Recognizing the needs for staff development, The Wisconsin Board of Vocational, Technical and Adult Education sponsored 32 programs which they listed in their "1970-71 Calendar of Called Conferences and Events."[4] An additional 141 activities were listed in the "calendar" as events which would be held throughout the State between August 23, 1970 and August 27, 1971.

The third sheet of the questionnaire contained questions relating to the personal background of the respondents. Tabulated results are presented as Table 16. It is interesting to note that all except nine of the respondents indicated that they had earned a four year college degree. Also significant is the fact that 85 percent of the respondents felt that their occupational experience was of "considerable value" and not one respondent accorded it "slight" value. When questioned regarding the adequacy of state certification requirements for vocational education, 74 percent of the respondents stipulated that the existing guidelines were "about right" with 13 percent expressing concern about their leniency and 12 percent stating that they were too strict.

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[4] See Appendix B.

TABLE 16

PERSONAL DATA
(N = 68)

1. Sex...Male (55) Female (11) Non respondent (2)

2. Age...Under 25(1) 25 to 34(22) 35 to 44(15) 45 to 54(15) 55 to 64(9) 65 or over(5) Non respondent (1)

3. Indicate the <u>one</u> division or major curriculum area in which you are teaching at the present time.

A) Trade and Industrial...(16)
B) Business and Office....(14)
C) Home Economics.....(0)
D) Agriculture.....(3)
E) Distributive.....(2)
F) Health and Welfare.....(8)
G) Technical.....(10)
H) General Academic.....(7)
I) Other (please indicate)....(6)

4. What is your <u>present</u> educational status? Check highest level.

A) High School graduate...(0)
B) Some college.....(7)
C) 4-year college degree..(4)
D) Graduate credits.....(29)
E) Masters degree.....(15)
F) Beyond Masters.....(12)
Non respondent.....(2)

5. How many years of full-time occupational experience do you have related to your present teaching position? 1-44

6. Do you find such experience helpful in your teaching?

Non respondent.....(4)
slight.....(0)
moderate.....(6)
considerable.....(58)

7. How many years of professional teaching experience do you have? 1-46

8. What type of certification do you presently hold?

Non respondent.....(3)
A) Provisional Certificate.....(25)
B) Standard State Certificate.....(20)
C) Life Certificate.....(20)

9. Do you find the present state vocational certification requirements (check one)....

Non respondent.....(2)
too strict.....(7)
about right.....(50)
too lenient.....(9)

CHAPTER IV

STATE PLAN PROVISIONS FOR PERSONNEL DEVELOPMENT

The Wisconsin State Plan is limited in its detail as it relates to personnel development. This is undoubtedly due to the fact that no formal or financial arrangement exists between the State Board and teacher education institutions. Wisconsin is somewhat unique in the Nation in that the State Board does not support financially the ongoing vocational teacher education programs of any of the universities in a direct fashion. A practice in most states is to support teacher educators through a contractual arrangement in which a portion of the teacher educators' salary would be paid from vocational education funds. On the negative side of such practice is the question of whether these services should not be furnished by the universities without special financial assistance; slso, the question whether appropriate controls can be exercised by the State Board staff.

Arguments in favor of the practice would suggest that the State Board can have more input into the curriculum and can secure necessary assistance in inservice educational programs if they are partially supported.

The present practice in Wisconsin is that the various universities make their major contribution through formal courses on campus or through extension while the major inservice task is carried out by the State Board and DPI staffs. In defense of university personnel they are limited usually in the amount of time they can devote to less formal or noncredit

enrollment activities since by practice their loads are determined and measured in terms of formal credit courses.

There is abundant evidence that the State Board and DPI staff have and are presently carrying out a substantial program of inservice work. The question that may arise, however, is whether an even more adequate job might be done by making universities greater partners in the inservice activity thus bringing additional manpower and expertise to the job. It would appear that this can be done only as a result of making financial resources available for this purpose.

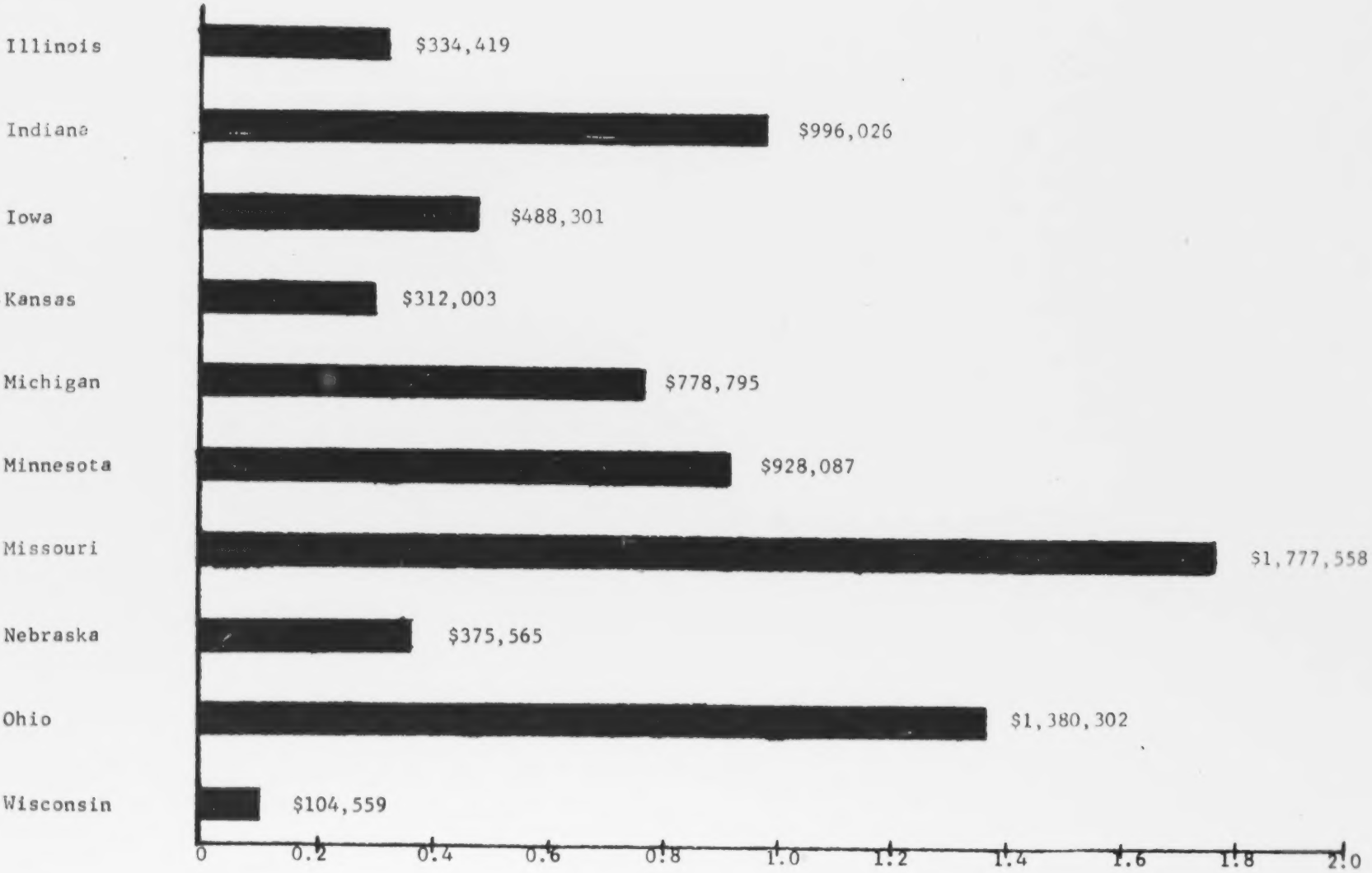
Financing Staff Development

Graph 1, based on preliminary figures for FY 1970, offers a comparison of federal expenditures by selected states for teacher education or, as used in this study, staff development. As can be seen, Wisconsin's total of $104,559 is substantially less than the neighboring states, several of which are less populous. The writer would hasten to suggest that these figures do not necessarily reflect the total effort in that districts invest money in inservice activities.

In an attempt to project a future commitment by the state to provide funds for staff development, Table 16 is presented. A projected total of $212,800 for staff development represents .3% of the total anticipated funds for FY 1972. Even if the capital outlay figure of $10,018,800 is subtracted from the total, the percent for staff development is increased only to .4%. Considering separately those funds from federal sources, staff development will account for $106,400 or 1.4%. When the total of $7,415,574 is reduced by the $1,477,329 for construction,

GRAPH I

EXPENDITURES - 1970



Teacher Education

(Millions of Dollars)

ED 045

Fiscal Year 1972

TABLE 16

ESTIMATED ALLOCATION OF FUNDS FOR STATE
VOCATIONAL EDUCATION PROGRAMS

Program/Purpose	Total Funds	%	Federal Funds	%	State and Local Funds	%
Part B State Programs						
Secondary	7,454,418		1,375,299		6,079,119	
Post Secondary	34,712,336		1,112,335		33,600,001	
Adult	7,168,717		336,717		6,832,000	
Disadvantaged	2,224,672		1,112,336		1,112,336	
Handicapped	1,483,115		741,558		741,557	
Contracted Instruction	11,200		5,600		5,600	
Guidance and Counseling	448,000		224,000		224,000	
Construction of Area Vocational Schools	10,018,405		1,477,329		8,541,076	
Ancillary Services (Total)	2,060,800		1,030,400		1,030,400	
Administration and Supervision	(1,803,200)		(901,600)		(901,600)	
Evaluation	-		-		-	
Teacher Training	(212,800)	.3%	(106,400)	1.4%	106,400	.18%
Research and Demonstration Projects	-		-		-	
Curriculum Development	(44,800)		(22,400)		(22,400	
Total	65,581,663		7,415,574		58,166,089	
Section 102(b) State Programs						
Disadvantaged	452,530		452,530		--	

Note: Estimate of expenditures as projected in accordance with the policies and procedures in the State Plan.

this percent increases to 1.7%. The projections for state-local figures are even more revealing. Of the total of $58,166,089 from these sources, only $106,400 or .18% is earmarked for staff development and this percent increases only to .2% when construction costs are subtracted from the total.

A review of the figures presented in this section clearly emphasizes the fact that staff development programs have been accorded rather low priority in the State of Wisconsin by those professionals who are responsible for budget planning and control.

Professional Development Under Part F, Higher Education Act of 1965

At the time of the passage of the Vocational Amendments of 1968 by Congress, the Higher Education Act of 1965 contained provisions for funding professional development activities, however, it tended to exclude vocational and technical education personnel. The proposed vocational and technical education bill made provisions for professional development which were similar to those in operation administered by a Bureau in the U. S. Office of Education established for that purpose. This fact led to removing the special provisions for personnel development from the vocational education legislation and making it an amendment to the Higher Education Act of 1965. The legislative provision is identified as "Title II - Vocational Education Leadership and Professional Development Amendment of Higher Education Act of 1965." Part F - Section 553 provides for grants to conduct inservice activities for teachers, supervisors, coordinators and administrators.

The State Board of Vocational, Technical and Adult Education is to be commended in their efforts to develop a "Comprehensive Plan for Professional Development" which will serve, when approved by the U. S. Office, as a guide under which projects may be developed by "private business and industry, commercial enterprises, or other educational institutions."

For purposes of administration of this section, the State Board staff has identified a staff committee made up of membership from the State Board staff and the staff of DPI. Also, a higher education committee has been identified with representation from each of the universities. In addition, a committee has been formed with membership from each of the districts. In the case of the district representative, he also assumes responsibility for the staff development program in his district.

It is too early to evaluate the outcome of this effort, however, it gives promise of making a substantial contribution. The fact that the State Board has involved many individuals from across the State in developing the comprehensive plan is not only commendable but represents a leadership posture that may not have been in evidence prior to this time. The success of the effort, however, can be measured only by the success in getting projects approved by the U. S. Office of Education.

A list of problems has been identified. While in tentative form at this time, it seems appropriate to include them in this report as evidence of the effort being set forth and perhaps as being representative of possible future direction and efforts in personnel development.

IDENTIFIED PROBLEMS IN LEADERSHIP DEVELOPMENT

Problem - The rapid expansion of the post high school Vocational, Technical and Adult Education system in Wisconsin, through the development of a statewide system of area vocational districts, has created a serious problem in the development of educational leaders to staff the system at all levels of administrative responsibility. This normal problem of growth is further compounded into a greater difficulty when it is aggravated by the greater social demands, and managerial expertise which is required today to adequately administer an educational enterprise.

An additional concern is the fact that the system traditionally has been occupationally oriented, pursuit of advanced degrees on the part of its leaders has been the exception. There is some legitimate concern that for lack of these qualifications, leadership and policy working positions will be forfeited to educators without specific background, knowledge or interest in vocational education. It is therefore exceedingly urgent that persons concerned in this field qualify themselves to compete for leadership at the policy level.

Objective - To establish an intern program, which will utilize the resources of the State Board of Vocational, Technical and Adult Education, the University of Wisconsin, and local vocational districts to insure an ongoing annual input of two established vocational educators into a doctoral candidate program. The first two interns should be enrolled during the 1971-72 school year.

Problem - To insure that the Wisconsin Vocational system, secondary and post secondary, obtains representative appointments into Doctoral level programs sponsored under Section 552, Part F of Public Law 90-35 (EPDA).

Section 552, Part F of the Educational Professions Development Act, is entitled the Leadership Development Program. This program is designed to increase the supply of qualified high level leadership personnel in vocational and technical education. Universities offering graduate study at the doctoral level in a comprehensive program of vocational education are eligible for grants under this act. Vocational staff members receiving two year grants under this section would assist in alleviating identified leadership problems.

Objective - To insure that a representative number of Wisconsin Vocational Educators annually receive awards sponsored under this section. Representation goals would be based on insuring that minimum allocations provided by the Department of Health, Education and Welfare are filled.

Problem - To establish an advanced graduate study program for Vocational Educators committed to a career as Adult Basic Educators.

Because the Adult Basic Education program is new in conception and implementation, a majority of the professional staff members have entered the program with traditional education preparation which does not reflect an Adult Basic Education background. There is a need for leadership and teacher trainer expertise in this area dealing with disadvantaged clientele.

Objective - To develop an intern fellowship program which will allow one participant to pursue a Doctoral Degree in Adult Education at the University of Wisconsin, for a two year period, and also be employed as a one-half time teacher trainer staff member in the State Board of Vocational, Technical and Adult Education. This program would be conducted during the 1971-72 and 1972-73 school years.

Problem - A leadership conference, of one week duration, should be conducted for 40 post-secondary staff members.

The development of vocational districts, accompanied by enlarged administrative staffs, has created a statewide influx of administrative staff members who do not necessarily have their philosophical roots grounded in vocational education. District problems which they address themselves to are normally related to their specific position. A conference of administrative personnel or potential administrators, covering the broad aspects of vocational education administrative problems would be of value to this group.

Objective - Conduct a leadership workshop during the 1971-72 school year.

Problem - A leadership development program for 20 secondary system LVEC's should be conducted.

The Vocational Education Act of 1963 provided new directions for vocational education, at the secondary level, in Wisconsin. This new emphasis has developed a statewide group of Local Vocational Education Coordinators (LVEC's) who are the administrators of vocational education at the secondary level.

This new educational development has evidenced the need to: 1) further develop the general and special vocational education competence of LVEC's who occupy newly formed positions of leadership and responsibility; and 2) provide special staff direction through the Department of Public Instruction to assist teacher educators in developing needed pre-service courses and in providing for a continuing in-service program for all LVEC's in the state.

Objective - Conduct a leadership workshop to serve a select group of 20 LVEC's during the 1971-72 and 1972-73 school years.

Problem - To upgrade additional nurse educators educationally through full time attendance in masters degree level educational programs.

The expansion of LPN programs and the rapid development of ADN programs has created a need for greater numbers of nurse educators with masters level graduate training. The ADN program requires these kinds of staff members as instructors and the health occupations field in general has a greatly increased need for educators with advanced degrees.

Objective - To utilize resources available to the State Board of Vocational, Technical and Adult Education, the two university systems in Wisconsin, and the local vocational districts, to further the educational stature of two nurse educators in the Wisconsin Vocational system during the 1971-72 school year.

Problem - There exists a need to develop in-service programs to serve the specific unique needs of the District Directors. These should be meaningful, rigorous, academic programs to provide administrative expertise not normally provided in their educational and work-experience background.

Objective - To develop a program during the 1971-72 school year which may be initially implemented for the in-service training of District Directors. To sponsor at least one training program for these administrators.

Problem - There exists a need to develop administrative evaluation programs which serve as the basis to determine the effectiveness of district administrative staff members.

Objective - To develop during the 1972-73 school year an administrative evaluation program which may be utilized by VTAE Districts.

Problem - Exchange of State and/or District personnel with universities should be studied.

Objective - Personnel exchange programs with universities should be undertaken by the 1973-74 school year.

SUPPORTIVE STAFF DEVELOPMENT

Problem - Develop seminar programs for High School guidance counselors which will provide them with meaningful programs in career orientation and career development activities for vocational students.

High school guidance counselors lack background information on the values of vocational education training on both the secondary and post-secondary levels. Seminar programs to direct them to vocational education should be established.

Objective - Establish a pilot program during the 1971-72 school year to direct high school guidance counselors to vocational education.

Problem - Joint appointments of district personnel with CESA Agencies and secondary schools should be studied.

Objective - Personnel exchange programs with CESA Agencies or secondary schools should be undertaken by the VTAE Districts by the 1973-74 school year.

Problem - There exists a need to develop workshops for supportive staff personnel directed towards specific timely issues such as Information Systems Development, fiscal year conversions, and other district/state management relationships.

Objective - To establish a minimum of two workshops during the 1971-72 school year for those supportive staff members affected.

INSTRUCTIONAL STAFF DEVELOPMENT

Problem - To establish a recruitment program which will provide assistance to the individual districts in the recruitment of professional staff members.

Occupationally competent, certified professional staff members for the Wisconsin Vocational-Technical System are difficult to recruit. This is especially true of occupational instructors employed in the health field and for newly developing programs. The advent of area development has greatly increased the demand for new staff members, this same development has apparently lessened the state staff's capability to assist in staff recruitment, this may be due to the fact that no new staff members have been made available to assist the districts in this matter. A formalized and on-going staff recruitment program is required to assist in solving this problem.

Objective - To develop a program of recruitment which may be utilized by the various districts to recruit professional staff members.

Problem - To develop teacher preparation programs to meet the unique needs of vocational education. Some of the teacher preparation problems currently facing vocational education are:

1. To meet the teacher preparation needs for new and future emerging occupational programs which will be established in the vocational system and for which there are no teacher preparation programs available.
2. The health occupations field is one of the fastest growing service areas in the Wisconsin vocational system today. There is a need to develop a comprehensive teacher preparation program for the health occupations.
3. There is a need to develop a teacher preparation program for "tradesmen" instructors and other instructors who enter the vocational system with less than baccalaureate degree preparation.
4. There is a need to develop teacher preparation programs to prepare general education teachers with a background which stresses the unique needs of vocational education.

There are very few teacher preparation programs available for vocational education in Wisconsin. Studies should be undertaken and action implemented to correct this situation.

Objective - To establish teacher preparation programs to serve the Wisconsin vocational education systems.

Problem - To establish a formal in-service program for the training of a minimum of 500 part time staff members.

The advent of vocational district development has greatly increased the field services obligation of the Wisconsin vocational system. Presently there are over 4,000 part-time instructors employed as instructors in the vocational system. The vast majority of these staff members have not been provided with the necessary in-service programs which help them identify themselves with vocational education.

There exists a need to establish a formal program of in-service training, throughout the state for part-time staff members. Areas to be covered by mini-courses are:

1. Philosophy and Principles of Vocational Education.
2. Methods and Techniques for Teaching Adults.
3. Methods and Techniques for Serving Persons with Special Needs.
4. Psychology Motivation, characteristics and needs of the adult learner.
5. Counseling and Interviewing Adult Students.
6. Evaluation of Effectiveness and Results of Service.

Objective - To support the Establishment of Formal in-service programs for part-time staff members in 3 VTAE Districts during the 1971-72 school year. Initial programs to train 300.

Problem - To establish an in-service institute for call-staff vocational-technical teachers trainers.

The rapid expansion of vocational districts full-time instructional staff has led to the expansion of collegiate level extension courses to assist these new staff members in obtaining standard certification status. To meet this need extension courses have been established by Stout State University, throughout Wisconsin utilizing selected approved district personnel as instructors.

There exists a need to establish a two week institute for these extension instructors to insure a continuity and cohesiveness of instruction.

Objective - Conduct a two week teacher training workshop during the 1971-72 school year for 20 call staff extension instructors.

Problem - To establish seminar programs for Adult Basic Education instructors, areas requiring emphasis are: evaluation, curriculum development, content area workshops, use of para-professionals in the classroom.

Many Adult Basic Education instructors have background area preparation in elementary instruction. These staff members need upgrading training in professional expertise to work with adults. Specific seminars designed to serve statewide staff members are needed to upgrade these personnel.

Objective - To conduct a seminar program in evaluation for ABE staff members. The seminar will consist of five two day meetings during the 1971-72 school year and will serve a minimum of 20 participants, and will be conducted at the University of Wisconsin.

Problem - To establish workshops to serve general education instructors. One or two week workshops for practitioners of Communications, Mathematics, Science, and Social Science subjects should be established.

New emphasis on general education subjects has created a large influx of general education staff members. Generally speaking, these staff members received a professional training which was oriented to the needs of secondary level, college bound students.

There exists a need for workshops which will serve the purposes of 1) developing a commonality of objectives for general education instructors, 2) provide these instructors with an insight and a philosophy which will allow them to work with adult students with a wide range of background interests and abilities, and 3) serve as the base for future local in-service programs.

Objective - To conduct a minimum of two general education workshops, for a minimum of 20 students each, during the 1971-72 school year.

Problem - To conduct workshops for Adult Basic Education para-professionals emphasizing classroom effectiveness for these staff members.

A number of para-professional staff members are utilized in the Adult Basic Education program. These staff members are in need of a training program which will assist them in becoming more effective in the classroom.

Objective - To conduct a workshop which will cover two 2-day weekends, and one weeks duration. The workshop will stress classroom effectiveness for para-professionals and will serve a minimum of 20 personnel. The workshop should be conducted during the 1971-72 school year.

Problem - Provide in-service workshop for high school administrators which will provide them with a vocational-technical orientation.

A large number of high school administrators are not familiar with the goals established for vocational education; nor are they aware of the potential program value which can be derived from vocational education programs.

Objective - To establish workshops which will provide school administrators with an orientation towards vocational education. This program will be conducted during the 1971-72 school year.

Problem - Develop workshop programs for High School vocational educators which will provide them with a better understanding of the problems of the urban society and how vocational education might relate to those problems.

Objective - To develop workshops for high school educators to solve the identified problem. The workshop should be established by the 1972-73 school year.

Problem - In-service workshop programs must be developed for high school vocational educators which will help them relate their teaching to the needs of handicapped and disadvantaged students.

Objective - To develop workshops for high school vocational educators. The workshop should be established by the 1972-73 school year.

Problem - Develop an in-service program for high school general educators which will direct them to the benefits which students can derive from a vocational program.

Objective - Establish a pilot program during the 1971-72 school year to orient high school guidance counselors to vocational education.

Problem - A program should be established to determine what skills will be needed by future teachers of technical subjects.

Objective - Projects should be established by the 1973-74 school year to address itself to the problem described.

Problem - A program should be established which will identify emerging occupations which will determine future staff needs.

Objective - Projects should be established by the 1973-74 school year to address itself to the problem described.

Problem - A program should be established to determine what skills will be needed by future teachers of general education subjects.

Objective - Projects should be established by the 1973-74 school year to address itself to the problem described.

Problem - There is a need to design training programs that will help teachers in vocational education and academic related areas to identify alternatives to traditional education programs in terms of serving dropouts and potential dropouts.

Objective - Projects should be established by the 1973-74 school year to address itself to the problem described.

Problem - Formal occupational experience programs for staff members requiring this training should be established by two districts.

It has long been recognized that occupational experience is the "backbone" of the vocational educating expertise. Many staff members require upgrading through additional occupational experience. It is known that the "ideal" situation regarding occupational experience programs is for the local educational unit to arrange agreement with local industries. To date very little has been done in this area of instructor development.

Attempts should be made to establish pilot programs, of occupational training agreements, in at least two of the eighteen vocational districts.

Objective - Encourage two VTAE districts to develop cooperative exchange programs with local industries during the 1971-72 school year.

Problem - There exists a need for the development of courses by universities to prepare post-secondary teachers in the classroom use of educational technology.

Objective - Universities and colleges, within the State of Wisconsin, should be contacted by the 1972-73 school year to determine which institutions may be in a position to offer these services.

Problem - There exists a need for annual on-going sequential nursing educator workshops to upgrade nursing instructors.

Objective - Work with the University of Wisconsin-Madison to insure that an annual program of workshops are established to serve the identified need.

Problem - There exists a need to develop an instructor evaluation program which may be utilized by the various districts to assess staff effectiveness.

Objective - To develop during the 1972-73 school year an instructional evaluation program which may be utilized by VTAE Districts.

Problem - Establish a one week workshop for preparing nursing instructors to meet minimum requirements to teach in ADN programs.

The Wisconsin vocational system is rapidly developing new Associate Degree, Registered Nursing Programs. Additional programs will be developed to meet the needs established by the discontinuance of existing hospital training programs. The technical competence required by staff members to teach in ADN programs is more rigid than that required for LPN programs. There exists a need, now, to upgrade present staff members to meet future needs.

Objective - To support the establishment of a one week workshop during the 1971-72 school year to upgrade nursing instructors to meet ADN requirements. To obtain a minimum of 20 students to attend such a conference.

Problem - A statewide program of cooperation with industries should be established to provide occupational experience for instructors of the vocational system needing this assistance.

Objective - By the 1973-74 school year a statewide program designed to offer occupational experience to vocational educators should be established.

Problem - A cooperative program between districts and industry should be considered to specifically assist general education staff members in determining how their disciplines apply to the world of work.

Objective - By the 1973-74 school year a cooperative program should be established to address itself to the problem described.

CHAPTER V

OBSERVATIONS AND CONCLUSIONS, AND RECOMMENDATIONS

This section of the report presents observations and conclusions of the assessment group. For the most part they have grown out of data reported in previous chapters; however, much more data was collected than reported, therefore not all observations or conclusions are necessarily supported directly by data found in the report.

A last section includes recommendations relative to the personnel development program.

Observations and Conclusions

. . . Evidence indicates that there will be a continuing demand for vocational teachers at both the post-secondary and secondary levels.

. . . The practice of recruiting post-secondary teachers, particularly from business and industry, is appropriate and should continue.

. . . Personnel development has not been a high priority especially in terms of financial support with the State Board; however, there is substantial evidence that the need to provide more resources is now being recognized and that a higher priority is being placed in this area.

. . . That liaison with universities is being strengthened in order to maximize their resources.

. . . Perhaps the greatest need is that of inservice education to strengthen present faculties and to build the strengths of individuals who may be recruited.

. . . A continued effort is desirable to facilitate the movement of individuals from business and industry into the vocational system. This is particularly true in expanding areas like the health occupations where professional preparation for the occupation is provided in a setting other than the traditional teacher preparation program.

. . . The data concerning secondary vocational programs would indicate that more needs to be done in terms of providing vocational orientation to high school counselors.

. . . The stated objectives of the post-secondary vocational system to place greater emphasis in the next five years in working with the culturally disadvantaged would seem to relate to an important priority.

. . . There is evidence at the post-secondary level particularly, that young administrators are being encouraged to further their academic preparation. An increasing number of State Board staff have enrolled at the University of Wisconsin and several District Administrators have been provided the opportunity to pursue further education both at Stout and the University of Wisconsin.

. . . The internship provided through Education Professions Development Act funds through the State Board is highly commendable.

. . . The inservice activities conducted by State Board of Vocational, Technical and Adult Education and the Department of Public Instruction staff appear to have been quite effective and represents a major effort of both staffs.

Recommendations

. . . Preservice programs for teachers should continue to be developed with particular emphasis on ways of providing teachers for new and expanding occupational areas.

. . . Additional emphasis is needed in the preparation of teachers of disadvantaged, both urban and rural.

. . . Teacher education institutions should continue to look toward ways to provide students with the occupational competence necessary. It will not be possible or maybe even desirable to build educational programs in a teacher education institution so that the major portion of the occupational content can be included for many of the occupational areas for which teachers are needed. The field experience program at Stout State University and the intern programs at the University of Wisconsin are good examples of one approach.

. . . Teacher education institutions should continue to move toward more flexibility in evaluation of competence for degree credit purposes gained as a result of professional training and industrial training or experience.

. . . Policies and programs should be encouraged that would increase the exchange of teachers and other staff members with skilled and supervisory personnel in industry in order to relate the programs in the schools more closely with employer needs.

. . . Additional financial resources should be made available through the State Board of Vocational, Technical and Adult Education for staff development.

. . . Consideration should be given to having a staff development position on the State Board staff. The role might appropriately be one of promoting and managing resources as opposed to carrying out staff development functions personally.

. . . Consideration should be given to supporting selected universities financially for carrying out rather clearly defined inservice activities on a continuing basis.

. . . The State Board should continue their efforts in making it possible for potential leaders in vocational education to secure further training through internships at the State Board office and through encouraging of policies at the District level which would make the pursuing of additional training possible.

APPENDICES

THE UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706

THE SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
WARF BUILDING, 610 WALNUT STREET
TELEPHONE (608) 263-2700

APPENDIX A

May 10, 1971

Dear Vocational Educator:

We would appreciate receiving your assistance in helping us assess staff development needs for vocational and technical personnel in post secondary schools.

Staff development is a major segment of a comprehensive assessment program being done of vocational and technical education for the State of Wisconsin under the leadership of the Wisconsin Advisory Council on Vocational and Technical education.

You can directly assist us by completing the attached form and returning it in the enclosed self-addressed stamped envelope as soon as possible. Your responses will maintain their anonymity and will be treated collectively in the analysis.

The final assessment report will be made public after it is completed. Thank you for your help.

Sincerely,

Merle E. Strong

Merle E. Strong, Chairman
Department of Educational Administration
and Study Director, Wisconsin Advisory
Council On Vocational Education

MES/nlm

Attachments

Code # _____

STAFF DEVELOPMENT QUESTIONNAIRE

DIRECTIONS: Following is a list of proficiency items related to training needs and requirements for teachers of vocational-technical education. For each statement there is one rating scale divided into three parts (1 2 3/ 4 5 6 7/ 8 9). Please circle one rating in each part of the scale which best indicates YOUR FEELINGS about the knowledge or skill with regard to YOUR JOB. The following key should be used for the assignment of the ratings:

1. My job requires slight proficiency with this activity.
2. My job requires moderate proficiency with this activity.
3. My job requires considerable proficiency with this activity.
4. My formal education provided slight proficiency in this activity.
5. My formal education provided moderate proficiency in this activity.
6. My formal education provided considerable proficiency in this activity.
7. The statement is inappropriate in my case.
8. Yes this proficiency should be improved through staff development.
9. No this proficiency should not be improved through staff development.

Please do not leave out any items--there are no right or wrong answers. Even if your exact choice is not found in one of the choices, select the one which comes closest to your true feeling.

NOTE: Each statement should have three ratings.

STAFF DEVELOPMENT QUESTIONNAIRE

I. What proficiency must you have in your work as a teacher in the ability to:

II. To what extent did a formal education provide this proficiency?

III. Should this proficiency be improved through staff development programs?

	I Proficiency			II Adequacy				III Staff Development	
	slight proficiency	moderate proficiency	considerable proficiency	slight	moderate	considerable	inappropriate	yes	no
1. purchase appropriate equipment and supplies.....	1	2	3	4	5	6	7	8	9
2. arrange for and conduct field trips.....	1	2	3	4	5	6	7	8	9
3. understand the goals for vocational-technical education.....	1	2	3	4	5	6	7	8	9
4. provide appropriate classroom learning experiences..	1	2	3	4	5	6	7	8	9
5. demonstrate the skills which are used on the job....	1	2	3	4	5	6	7	8	9
6. understand the history of vocational-technical education.....	1	2	3	4	5	6	7	8	9
7. know state requirements for vocational facilities...	1	2	3	4	5	6	7	8	9
8. relate technological advances to laboratory instruction.....	1	2	3	4	5	6	7	8	9
9. develop materials for instructional purposes.....	1	2	3	4	5	6	7	8	9
10. maintain discipline in the shop or laboratory.....	1	2	3	4	5	6	7	8	9
11. revise the course of study in accord with occupational trends.....	1	2	3	4	5	6	7	8	9
12. develop objective tests to measure achievement.....	1	2	3	4	5	6	7	8	9
13. motivate the student.....	1	2	3	4	5	6	7	8	9
14. understand the legal provisions of teacher liability.	1	2	3	4	5	6	7	8	9
15. make use of Federal legislation for vocational-technical education.....	1	2	3	4	5	6	7	8	9
16. provide appropriate laboratory learning experiences.	1	2	3	4	5	6	7	8	9
17. relate the daily lesson plan to the course of study .	1	2	3	4	5	6	7	8	9
18. take the initiative when dealing with administrators.	1	2	3	4	5	6	7	8	9
19. make a lesson meaningful to each student.....	1	2	3	4	5	6	7	8	9
20. use tools and equipment found on the job.....	1	2	3	4	5	6	7	8	9
21. assess the reliability of teacher-made tests.....	1	2	3	4	5	6	7	8	9

I. What proficiency must you have in your work as a teacher in the ability to:

II. To what extent did a formal education provide this proficiency?

III. Should this proficiency be improved through staff development programs?

		I Proficiency			II Adequacy				III Staff Development	
		slight proficiency	moderate proficiency	considerable proficiency	slight	moderate	considerable	inappropriate	yes	no
22.	make a daily lesson plan	1	2	3	4	5	6	7	8	9
23.	maintain attention while presenting a demonstration	1	2	3	4	5	6	7	8	9
24.	provide appropriate practice for skill learning experiences	1	2	3	4	5	6	7	8	9
25.	assess the validity of teacher-made tests	1	2	3	4	5	6	7	8	9
26.	maintain necessary report forms required by various groups and agencies	1	2	3	4	5	6	7	8	9
27.	use written records for informational purposes	1	2	3	4	5	6	7	8	9
28.	review a demonstration	1	2	3	4	5	6	7	8	9
29.	use technical terms and jargon	1	2	3	4	5	6	7	8	9
30.	utilize the services of appropriate agencies responsible for vocational-technical education	1	2	3	4	5	6	7	8	9
31.	use the services of advisory committees	1	2	3	4	5	6	7	8	9
32.	break down an occupation or job into its component parts for instructional purposes	1	2	3	4	5	6	7	8	9
33.	develop performance tests to measure achievement	1	2	3	4	5	6	7	8	9
34.	develop job sheets to aid instruction	1	2	3	4	5	6	7	8	9
35.	develop subjective tests to measure achievement	1	2	3	4	5	6	7	8	9
36.	select instructional material	1	2	3	4	5	6	7	8	9
37.	provide occupational guidance information to students	1	2	3	4	5	6	7	8	9
38.	be stimulating in your work as a teacher	1	2	3	4	5	6	7	8	9
39.	interpret local school policies	1	2	3	4	5	6	7	8	9
40.	utilize guidance and counseling services	1	2	3	4	5	6	7	8	9

APPENDIX B

WISCONSIN BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
137 East Wilson Street, Madison, Wisconsin 53703
C. L. Greiber, Director

September 30, 1970

I.L. 71-50
Subject: 1970-71 Calendar of Called Conferences and Events

To the District Directors
Wisconsin Schools of Vocational,
Technical and Adult Education

Dear Co-Worker:

Copies of the 1970-71 "Called Conferences" are enclosed for your information.

The called conferences have been designed to improve the quality of education in our districts. Participation by your district would be of great importance.

In addition, a listing of meetings is enclosed for your information. These meetings have been called by other agencies, such as the U. S. Office of Education, Administrators' Association and State Advisory Committees.

If you should desire further information, please feel free to contact us.

Sincerely,

C. L. Greiber

C. L. Greiber
State Director

pr

Enc.

Board of Vocational, Technical and Adult Education
Called Conferences

Date	Title	Staff Responsibility	City
September 1-3	Data Processing Teachers Wksp.	V. Swenson	Milwaukee
September 10	Nursing Assistant Workshop	B. Palen	La Crosse
October 15-17	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
October 20-21	Teacher Training Workshop - Welding	S. Munson	Appleton
October 21	Seminar for Instructional Television Producers	R. Johnson	Milwaukee
October 29-30	General Education Coordinators and Supervisors Meeting	R. Johnson	Madison
November 17	Traffic Safety Specialist Workshop	O. Mehlberg	Madison
November 24	State Typewriting Teachers' Workshop	J. Urness	Madison
December 15	Office Educ., Dist. Educ. and T & I Coordinators Occupational Ext. Wksp.	V. Swenson G. Kinsler	Eau Claire
December 16	Office Educ., Dist. Educ. and T & I Coordinators Occupational Ext. Wksp.	V. Swenson G. Kinsler	Appleton
December 17	Office Educ., Dist. Educ. and T & I Coordinators Occupational Ext. Wksp.	V. Swenson G. Kinsler	Waukesha
December 17	Practical Nursing Instructors' Workshop (tentative)	C. Schloemer	Madison
December 1970	Library Workshop (Occupational Extension Course)	H. Scheve	Madison
January 15, 1971	Teacher Training Workshop - Production & Manufacturing Technology	A. Potthast	Milwaukee
January 24-February 5	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
January 1971	Health Occupations Coordinators' Conf.	C. Schloemer	Madison
January 1971	General Education Coordinators and Supervisors Meeting	R. Johnson	*
February 16	Traffic Safety Specialist Workshop	O. Mehlberg	Madison
February 18-19	Librarian-Media Specialist Conf.	C. Zenor	Rhinelander
March 5	Teacher Training Workshop - Air Conditioning, Instrumentation and Refrigeration	A. Potthast	La Crosse
March 11-13	State DECA (WDEA) Leadership Conf.	V. Swenson	Green Lake

Date	Title	Staff Responsibility	City
March 26	Driver-Safety Workshop	O. Mehlberg	Stevens Point
April 1-3	State OEA (WBEC) Leadership Conf.	V. Swenson	Green Lake
April 22-23	Teacher Training Workshop - Mechanical Design and Drafting	A. Potthast	Wisconsin Rapids
April 1971	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
April 1971	General Education Coordinators and Supervisors Meeting	R. Johnson	*
Spring 1971	Practical Nursing Coordinators' Conf.	C. Schloemer	Madison
May 13	Medical Assistants Faculty Workshop	B. Palen	Sheboygan
May 18	Traffic Safety Specialist Workshop	O. Mehlberg	Madison
May 27	Operating Room Assistants Faculty Workshop	B. Palen	Madison
July 10-14	Summer Conference for Young and Adult Farmer Instructors	D. Beyl	Madison
Week Starting August 16	Professional Growth Week	L. Allwardt	*

*Places to be announced

Calendar of Events for the School Year 1970-71

Date	Title	Staff Responsibility	City
August 23, 1970	Regional Fire Training School	G. Christianson	Monroe
September 1-3	Data Processing Teachers Wksp.	V. Swenson	Milwaukee
September 10	Nursing Assistant Workshop	B. Palen	La Crosse
September 12	Course of Study Committee for Young & Adult Farmer Programs	D. Beyl	Appleton
September 13	Regional Fire Training School	G. Christianson	Ladysmith
September 16	Statewide CAMPS Seminar	M. Bodine	Wausau
September 17	Review-Planning Meeting - Participants at National Rural Inst.	R. Krogstad	Madison
September 18	Family Living Education Conf.	C. Nickel	Milwaukee
September 19	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Milwaukee
September 20	Regional Fire Training School	G. Christianson	Biron
September 22	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Platteville
September 23	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Whitewater
September 24	Adult Education Association of Wisconsin Committee Workshops	R. Krogstad	Wisconsin Dells
September 25	East Central Guidance Conference	L. Celley	Oshkosh
September 25-26	DECA Presidents' Seminar	V. Swenson	Wisconsin Dells
September 29	Research Committee of Administrators' Association	R. Krogstad	Madison
September 29	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Menomonie
September 29	Wisconsin Association of Student Financial Aid Administrators	B. McConnell	Green Bay
September 30	Student Financial Aid Tripartite Meeting U.S.O.E.	B. McConnell	Green Bay
September 30	Driver Education Wksp. (WDTSEA)	O. Mehlberg	La Crosse
September 30	Food Service Advisory Committee Meeting	H. Scheve	Madison
October 5	OEA Local Officers' Workshop	V. Swenson	Green Lake
October 6	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Ashland
October 6	Teacher Certification Comm. Mtg.	L. Allwardt	*

Date	Title	Staff Responsibility	City
October 6	Review and Planning Meeting "Vocational Education for Metropolitan Areas"	H. Sahakian	Madison
October 6	Drive-In Workshop for High School Counselors	B. McConnell	Stevens Point
October 6	Advisory Committee for Distributive Education	V. Swenson	Madison
October 7	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Eagle River
October 7	Drive-In Workshop for High School Counselors	B. McConnell	Milwaukee
October 8	Wisconsin Association of Institutional Research Meeting	R. Krogstad	Rhinelander
October 8	Annual Guidance Conference	L. Celley	Whitewater
October 13	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Algoma
October 13	Drive-In Workshop for High School Counselors	B. McConnell	Rice Lake
October 13-15	Institute "Attitudes and Misconceptions About the Handicapped"	H. Sahakian	Madison
October 14	Driver Education Wksp. (WDTSEA)	O. Mehlberg	Wausau
October 14	Drive-In Workshop for High School Counselors	B. McConnell	Appleton
October 14-15	Farm Progress Days	D. Beyl	Sun Prairie
October 15	Drive-In Workshop for High School Counselors	B. McConnell	Richland Center
October 15-17	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
October 20-21	Teacher Training Wksp. - Welding	S. Munson	Appleton
October 20-22	Institute "Attitudes and Misconceptions About the Handicapped"	H. Sahakian	Madison
October 21	Drive-In Workshop for High School Counselors	B. McConnell	Milwaukee
October 21	Seminar for Instructional Television Producers	R. Johnson	Milwaukee
October 22	District In-Service Training	V. Swenson	Wausau
October 22	Driver Education Adv. Comm. Mtg.	O. Mehlberg	Milwaukee

Date	Title	Staff Responsibility	City
October 22	Drive-In Workshop for High School Counselors	B. McConnell	Kenosha
October 23	Homemakers Clubs Conference Planning Committee	C. Nickel	Madison
October 25-30	AEA-USA Conference	R. Krogstad	Atlanta, Georgia
October 26-30	National Safety Congress	O. Mehlberg	Chicago, Illinois
October 29-30	General Education Coordinators and Supervisors Meeting	R. Johnson	Madison
October 30-31	Instructional Services Association of Wisconsin	C. Zenor	Waukesha
October 1970	State Advisory Committee - Nursing Education	C. Schloemer	Madison
October 1970	Wis. Nurses Assoc. Annual Mtg.	C. Schloemer	Milwaukee
October 1970	Interior Design Adv. Comm. Mtg.	H. Scheve	Madison
October 1970	Home Management Adv. Comm. Mtg.	H. Scheve	Madison
October 1970	Advanced Cosmetology Advisory Committee Meeting	H. Scheve	Madison
October 1970	Environmental Control Comm. Mtg.		Madison
October 1970	T & I Youth Club Adv. Comm. Mtg.	O. Mehlberg	Wausau
November 3-5	Wisconsin Education Association		Milwaukee
November 5-6	Wisconsin Personnel and Guidance Association Meeting	L. Celley	Stevens Point
November 10-11	District In-Service Training	V. Swenson	Kenosha
November 13	State Advisory Para-Medical Committee Meeting	B. Palen	Madison
November 13-14	Commercial Driving School Curriculum	O. Mehlberg	Wisconsin Dells
November 17	Traffic Safety Specialist Wksp.	O. Mehlberg	Madison
November 22-24	Midwest Association of Student Financial Aid Administrators	B. McConnell	Kansas City, Missouri
November 22-24	Association of Allied Health Professions	C. Schloemer	Chicago, Illinois
November 24	State Typewriting Teachers' Wksp.	J. Urness	Madison
November 1970	Course of Study Committee for Young & Adult Farmer Programs	D. Beyl	Appleton
November 1970	Course of Study Committee for Young & Adult Farmer Programs	D. Beyl	*

Date	Title	Staff Responsibility	City
November 1970	Conference on Rural and Metropolitan Vocational Education Needs and Exemplary Programs	H. Sahakian	*
November 1970	Animal Technician Comm. Mtg.	D. Beyl	Madison
November-December	Agriculture Income Tax Workshops	D. Beyl	*
December 8	Teacher Certification Comm. Mtg.	L. Allwardt	*
December 11	State Advisory Para-Dental Committee Meeting	B. Palen	Madison
December 15	State Adv. Comm. on Continuing Education of Licensed Practical Nurses	B. Palen	Madison
December 15	Office Educ., Dist. Educ. and T & I Coordinators Occupational Extension Workshop	V. Swenson G. Kinsler	Eau Claire
December 16	Office Educ., Dist. Educ. and T & I Coordinators Occupational Extension Workshop	V. Swenson G. Kinsler	Appleton
December 17	Office Educ., Dist. Educ. and T & I Coordinators Occupational Extension Workshop	V. Swenson G. Kinsler	Waukesha
December 17	Practical Nursing Instructors' Workshop (tentative)	C. Schloemer	Madison
December 1970	Library Workshop (Occupational Extension Course)	H. Scheve	Madison
December 1970	State Advisory Committee for Young & Adult Farmer Program	D. Beyl	Madison
December 1970	State Adv. Conservation Program	D. Beyl	Madison
December 1970	State Advisory Committee Agri-Business Program	D. Beyl	Madison
January 15, 1971	Teacher Training Workshop - Production & Manufacturing Tech.	A. Potthast	Milwaukee
January 24-February 5	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
January 1971	Health Occupations Coordinators' Conference	C. Schloemer	Madison
January 1971	General Education Coordinators and Supervisors Meeting	R. Johnson	*
January 1971	Pesticides Conference	D. Beyl	Madison

Date	Title	Staff Responsibility	City
February 2	District In-Service Training	V. Swenson	Appleton
February 3-4	Regional Fire Training School	G. Christianson	Spooner
February 9	Teacher Certification Comm. Mtg.	L. Allwardt	*
February 10	Farm Labor Conference	D. Beyl	Appleton
February 11	Farm Labor Conference	D. Beyl	Sparta
February 11	Regional Fire Training School	G. Christianson	Kiel
February 16	Traffic Safety Specialist Wksp.	O. Mehlberg	Madison
February 18	Regional Fire Training School	G. Christianson	Plymouth
February 18-19	Librarian-Media Specialist Conf.	C. Zenor	Rhinelander
February 1971	State Advisory Committee - Nursing Education	C. Schloemer	Madison
February 1971	Course of Study Committee for Young & Adult Farmer Program	D. Beyl	Appleton
February 1971	Course of Study Committee for Young & Adult Farmer Program	D. Beyl	*
February 1971	Fertilizers and Lime Conference	D. Beyl	Madison
February 1971	State Advisory Committee Horticulture Program	D. Beyl	Kenosha
February 1971	Stout Guidance Conference	L. Celley	Menomonie
March 5	Teacher Training Workshop - Air Conditioning, Instrumentation and Refrigeration	A. Potthast	La Crosse
March 11-13	State DECA (WDEA) Leadership Conference	V. Swenson	Green Lake
March 19-20	Instructional Services Association of Wisconsin	C. Zenor	Antigo
March 26	Driver-Safety Workshop	O. Mehlberg	Stevens Point
March 27	Wisconsin Driver Traffic Safety Education Workshop	O. Mehlberg	Stevens Point
March 1971	Early Childhood Adv. Comm. Mtg.	C. Nickel	Madison
March 1971	American Association of Junior Colleges	C. Schloemer	Washington, D. C.
March 1971	In-Service Meetings for Young and Adult Farmer Instructors	D. Beyl	*

Date	Title	Staff Responsibility	City
March 30-31-April 1	U. S. Office of Education Region V Distributive Education Conf.	V. Swenson	Benton Harbor, Michigan
April 1-3	State OEA (WBEC) Leadership Conf.	V. Swenson	Green Lake
April 6	Teacher Certification Comm. Mtg.	L. Allwardt	*
April 15-16	Wisconsin Safety Conference	O. Mehlberg	Milwaukee
April 21-22	Instructors' Seminar (Fire Trg.)	G. Christianson	Marshfield
April 22	Dental Auxiliaries Faculties Workshop	B. Palen	Milwaukee
April 22-23	Teacher Training Workshop - Mechanical Design & Drafting	A. Potthast	Wisconsin Rapids
April 22-25	National DECA Leadership Conf.	V. Swenson	San Antonio, Texas
April 23-24	Adult Education Association of Wisconsin	R. Johnson	*
April 1971	Adult Basic Education Teacher Aide Seminar	C. Martin	Madison
April 1971	General Education Coordinators and Supervisors Meeting	R. Johnson	*
Spring 1971	Practical Nursing Coordinators' Conference	C. Schloemer	Madison
May 2-4	National OEA Leadership Conf.	V. Swenson	Indianapolis, Ind.
May 6-7	Wisconsin Association for Vocational and Adult Education		Milwaukee
May 11-12	Arson Seminar	G. Christianson	La Crosse
May 13	State Conference Vocational Homemakers Clubs	C. Nickel	Green Lake
May 13	Medical Assistants Faculty Wksp.	B. Palen	Sheboygan
May 18	Traffic Safety Specialist Wksp.	O. Mehlberg	Madison
May 19-20	Mechanics' Seminar (Fire Trg.)	G. Christianson	Oshkosh
May 27	Operating Room Assistants Faculty Workshop	B. Palen	Madison
May 1971	State Advisory Para-Medical Committee Meeting	B. Palen	Madison
May 1971	National League for Nursing	C. Schloemer	St. Louis, Mo. ?
June 3-4	Aerial and Ladder School	G. Christianson	West Allis

Date	Title	Staff Responsibility	City
June 18-19	Aircraft Firefighting School	G. Christianson	Madison
June 1971	Vocational Research Practice Seminar	R. Krogstad	Menomonie
June 1971	State Advisory Committee Food Manufacturing	D. Beyl	Fond du Lac
June 1971	State Advisory Para-Dental Committee Meeting	B. Palen	Madison
July 10-14	Summer Conference for Young and Adult Farmer Instructors	D. Beyl	Madison
July 13-15	Farm Progress Days	D. Beyl	West Salem
Week Starting August 16	Professional Growth Week	L. Allwardt	*
August 17	Traffic Safety Specialist Wksp.	O. Mehlberg	Madison
August 23-27	American Driver Traffic Safety Education Conference	O. Mehlberg	Springfield, Ill.
Dates to be set	Inter-Agency Regional Meetings on the Handicapped	H. Sahakian	*
Dates to be set	District Teacher Training	C. Martin	*

*Places to be announced

VT 016 570
GARMON, BEN
COMPREHENSIVE OCCUPATIONAL EDUCATION PROGRAM FOR THE ELEMENTARY AND SECONDARY SCHOOL.
INTERIM REPORT.

HUNTSVILLE CITY BOARD OF EDUCATION, ALA.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
OEG-0-70-5185(361)
PUB DATE - 19MAY72 59P.

DESCRIPTORS - *CAREER EDUCATION; *VOCATIONAL DEVELOPMENT; *DISADVANTAGED YOUTH; *HANDICAPPED STUDENTS; DROPOUT PREVENTION; GUIDANCE SERVICES; CAREER PLANNING; DECISION MAKING SKILLS; *DEVELOPMENTAL PROGRAMS; ELEMENTARY GRADES; SECONDARY GRADES; OCCUPATIONAL INFORMATION; OCCUPATIONAL CLUSTERS; INTEGRATED CURRICULUM; CURRICULUM DEVELOPMENT
IDENTIFIERS - *EXEMPLARY PROJECTS; DECISION; CAREER AWARENESS

ABSTRACT - THE GOALS OF THIS EXEMPLARY PROJECT WERE TO PROVIDE: (1) AN INTEGRATED PROGRAM AT THE ELEMENTARY AND SECONDARY LEVEL, (2) GUIDANCE AND COUNSELING SERVICES AT THE SECONDARY LEVEL, (3) VOCATIONAL PROGRAMS TO ASSIST EVERY SCHOOL TRAINEE, PARTICULARLY DISADVANTAGED AND/OR HANDICAPPED YOUTH, IN DEVELOPING BASIC JOB SKILLS, AND (4) EXTENSIVE STUDENT PERSONNEL SERVICES FOR EACH SCHOOL TRAINEE. DURING THE FIRST YEAR, THESE RESULTS WERE ACHIEVED: (1) MANY ELEMENTARY AND JUNIOR HIGH SCHOOL STUDENTS HAVE BEEN EXPOSED TO OCCUPATIONAL INFORMATION THAT SHOULD ASSIST THEM IN MAKING MORE REALISTIC CAREER CHOICES, (2) MANY ELEMENTARY AND JUNIOR HIGH SCHOOL TEACHERS ARE DEVELOPING MORE POSITIVE ATTITUDES TOWARD THE CAREER DEVELOPMENT PROGRAM, (3) MANY DISADVANTAGED STUDENTS HAVE BEEN PLACED IN EMPLOYMENT OR WORK EXPERIENCE SITUATIONS AS A DIRECT RESULT OF THE PROJECT, (4) CURRICULUM MATERIALS ARE BEING FIELD-TESTED AND REVISED BEFORE PUBLICATION AND DISSEMINATION, AND (5) DATA GATHERING FOR THE SUMMATIVE EVALUATION HAS BEEN INITIATED. BASED UPON EXPERIENCES GAINED IN THE PROJECT, IT WAS CONCLUDED THAT THE PROJECT DESIGN IS EFFICIENT AND EFFECTIVE IN IMPLEMENTING A CAREER EDUCATION PROGRAMS, AND THE STAFF ARE EXTREMELY COMPETENT AND SHOULD FACILITATE MEETING THE PROJECT OBJECTIVES. (SB)

VT 016 570

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Interim Report

Project No. 0-361-0150
Grant No. OEG-0-70-5185(361)

Comprehensive Occupational Education Program for the Elementary and Secondary School

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Ben Garmon

Huntsville City Board of Education
P. O. Box 128
Huntsville, Alabama 35804

May 19, 1972

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I. SUMMARY OF REPORT

COMPREHENSIVE OCCUPATIONAL EDUCATION PROGRAM FOR THE ELEMENTARY AND SECONDARY SCHOOL

A. Time Period Covered by the Report

The Huntsville, Alabama project, "Comprehensive Occupational Education Program for the Elementary and Secondary School", is a three year project. The project was funded November 10, 1970, and is to extend through December 31, 1973.

The time period covered by the report is from January 1, 1971 through December 31, 1971, which is the first year of operation of the Huntsville program.

B. Objectives

The central purpose of this program is to package and demonstrate in one operational setting those practices found effective in other isolated programs. More specifically, the project objectives are:

1. To provide an integrated occupational orientation program at the elementary and secondary level to broaden the experiences of students.

2. To provide guidance and counseling services at the secondary school level necessary to assist students in appraising their current interest, aptitudes, skills, and personalities in relation to their occupational preferences.

3. To provide vocational programs to assist every school terminee, with special emphasis upon those with academic, socioeconomic and other handicaps, in developing basic understandings, skills and abilities needed for job entry and/or continuing education in the areas of the student's occupational choice.

4. To provide extensive student personnel services, including guidance, counseling and placement, for each school terminee.

C. Procedures

Acceptance of the concepts of occupational choice and vocational maturity as a process which begins early in childhood and continues well into adulthood indicates a need for a comprehensive occupational education program with structure, content, and processes which will provide students with occupational information, guidance, and learning experiences at appropriate times as they move toward vocational maturity and the transition from school to work.

Work experience situations on-campus or in selected establishments in the community are being provided for students who need financial assistance to remain in school, or who can otherwise profit from the experience. Next academic year, students whose proneness to drop out seems irreversible will be provided short-term intensified training in selected occupational areas; therefore providing them with at least minimal employment skills before they sever their connection with the school. Some potential dropouts who complete this intensive training may be induced to remain in school and apply their skills in a work experience or cooperative training program.

Short-term intensive training and cooperative part-time training also provides occupational education opportunities for students who are not dropout-prone, but who have not had previous training and wish to develop salable skills prior to graduation.

D. Results and Accomplishments

1. Many students at the elementary and junior high levels have been exposed to occupational information that should assist them in making more realistic career choices when the time comes.

2. Many teachers in the elementary and junior high schools are developing more positive attitude toward the career development program and many have already integrated the occupational information into their own curriculums.

3. Many disadvantaged students have been placed in employment or work experience situations as a direct result of the project.

4. Observable attitudinal changes have been made in many students involved in the program.

5. Lines of communication have been established and cooperative activities initiated with many other governmental and community action agencies. Excellent working relationships exist with Model Cities, other governmental agencies, social and lay organizations.

6. Curriculum materials are being field-tested and revised before publication and dissemination.

7. Data gathering for the summative evaluation has been initiated.

8. Many students have been held in school already, as a direct result of guidance and counseling by the exemplary staff.

9. The exemplary staff have become accepted members of each participating school. Success in this phase is felt due to the philosophy and approaches taken to insure that the project becomes an integral part of each school curriculum.

10. Excellent plans have been initiated in the utilization of resource persons in the educational process of career development.

11. Personnel with excellent qualifications and attitudes have been selected to work in the program.

E. Evaluation

The staff members of the Occupational Research Development Unit of Auburn University are assuming the major responsibility for directing the evaluation of the program. The ORDU staff has established evaluative criteria and is coordinating the development of additional tests, developing data collection procedures and instruments, and collecting and analyzing data pertaining to the operation of the program.

The program evaluation model (Figure 2, page 19a) is a graphic representation of the sequence and principal factors which will be considered in the formative evaluative process for the project. Steps 1 through 7 represent the sequence and factors for conventional program evaluation. Steps 8, 9, and 10 adapt the model for use in exemplary programs and provide feedback and corrective action.

Summative evaluation will consist of determining the extent to which students exposed to the proposed program have:

Objective 1 ... increased their knowledge up to or above a predetermined level as measured by pre- and post-administration of teacher constructed examinations.

Objective 2 ... made realistic occupational preferences as indicated by a comparison of counselor assessment prior to enrollment in programs, counseling and student follow-up activities, and measurement by the Minnesota Satisfaction Questionnaire.

Objective 1 and 2 ... developed greater vocational maturity as measured by pre- and post-administration of the Attitude Test of the Vocational Development Inventory.

Objective 2 and 3 ... developed a salable skill in the occupation of their choice as measured by the Minnesota Employment Satisfactoriness Questionnaire after one month of employment.

Objective 4 ... have had a minimum of four individual counseling sessions before terminating their schooling as measured by 10 percent random selection of 11th and 12th grade program enrollees.

Objective 5 ... have had a minimum of four individual counseling sessions before terminating their schooling as measured by 10 percent random selection of 11th and 12th grade program enrollees.

The Data Matrix for gathering data for the summative evaluation is included as Appendix A.

The third parties progress and evaluation report is attached as Appendix B in this report.

F. Conclusions and Recommendations

1. Conclusions

Based upon the experiences already gained in the project and the local constraints in the Huntsville setting the following conclusions have been drawn, at this time frame, for the project.

a. The project design is one of the most efficient and effective designs for the implementation of a career education program.

b. The staff members who have been selected are extremely competent and should facilitate meeting of project objectives most effectively.

c. A program as massive as the Huntsville Project definitely needs a full-time project-coordinator who has the major responsibility for the project.

d. A sound foundation has been developed to the present time to further ensure a successful project.

e. Excellent cooperation between many governmental and social agencies has added many benefits to the project. Opportunities now exist to assist students in career development that would never have been possible and many other opportunities are developing.

2. Recommendations

A major justification for the Huntsville project was to develop and implement a comprehensive occupational education program for the elementary and secondary school utilizing a largely disadvantaged population. This was to be the tooling-up phase for a total career education program that would better serve the needs of the nation and its citizens. At this point in time the following recommendations are made:

a. Fundings of projects and project starting times should coincide with the academic year in school systems whenever possible.

b. Strong leadership from the superintendent and other administrators in a school system is necessary for career education to be a success. Vocational educators cannot carry out a total career education program in a school system.

c. Materials should be thoroughly field tested before they are published and disseminated. Publishing and disseminating for their sake alone may reduce or slow down the transferability process.

d. The use of consultants can be a valuable motivational tool for staff members and they sould be periodically.

e. To be effective and maintain longevity the changing of the school curriculum to approach a career education conept should never be a forced act in a school system. Proper teacher attitudes are a must and the introduction and initiation phase must be a slow and diligent process.

II. BODY OF REPORT

COMPREHENSIVE OCCUPATIONAL EDUCATION PROGRAM FOR THE ELEMENTARY AND SECONDARY SCHOOL

Vocational education shares with all education the responsibility of assisting youth with the inevitable problem of transition from school to employment. The school curriculum is one of the vehicles by which this transition could be made somewhat easier if effectively organized. The organization and offerings of the present school curriculum do not provide for the fullest development of human potential in that the curriculum does not allow students an opportunity to explore and identify with the occupations. Programs of instruction should be initiated from elementary through the high school to allow for and guide the career development process.

A. The Nature and Significances of the Program

Vocational education shares with all other educational activities in the schools a responsibility for assisting youth with the inevitable problem of transition from school to employment. This transition may occur prior to graduation (as in the case of dropouts), upon graduation, or may be postponed by further educational experiences at the post-high school level. The essential points are that the transition does occur and the schools have a responsibility for making it effective.

The central tenet of this project is expressed in six foundation statements for directing innovated thinking and the adoption of proven practices for more effective vocational education programs. (1965;7)

The statements are as follows:

1. Accessibility to quality vocational education programs;

2. Programs to meet the full spectrum of capabilities of youth and adults;

3. Coupling vocational and general education as integral parts of a common core within a total educational program;

4. Open-ended continuous vocational education and training opportunities;

5. Early orientation to vocational education through exploratory occupational experiences in a setting where the traditional division of education into separate educational subject disciplines is replaced by an educational "mix" starting in the elementary school; and

6. Instructional flexibility to prepare students for adaptation to constantly changing employment patterns.

In view of the diminshed opportunities of present-day youth to directly observe and explore the broad spectrum of the occupational alternatives available to them, it should be the function of the schools at all levels to provide experiences that broaden the range of occupational aspirations and opportunities for all youth.

The problem to which this project is addressed is that of designing and implementing in the Huntsville City Schools a comprehensive program of occupational information, vocational counseling, and vocational instruction which will effectively create a bridge between school and work for young people. The proposed services extend from the elementary through the high school level for youth of all ages and abilities, with particular emphasis upon youth with academic, socioeconomic, or other handicaps.

This goal is being accomplished by redirecting some present programs at the high school level and implementing new programs of occupational information, occupational orientation, counseling, vocational preparation, and placement.

The following discussion notes previous studies and experiments and related literature that form the foundation for meeting project objectives while meeting the needs of students.

Traditional programs of occupational education have tended to be designed in view of assumptions that students would remain in school at least until high school graudation and that, somehow, students would make realistic occupational choices when they reached the senior high school level where most occupational preparatory instruction is provided. Even now, in most school systems occupational orientation and guidance activities are concentrated at the senior high school level. There is considerable research to indicate that these activities should also be provided at the elementary and junior high levels.

Probably two of the most imperative reasons for extending occupational orientation and guidance activities down into the elementary and junior high schools in the proposed project are:

1. Occupational choice and development of vocational maturity are long-range processes which begin early in a child's life; and

2. As society becomes more complex and the variety of occupations proliferates, youth have diminished opportunities for observation of and exploratory experiences in those occupational areas.

Occupational orientation and guidance were perhaps less important responsibilities of the schools in an earlier rurally-oriented society where a youth might, in the course of his day-to-day activities, have opportunities for direct observation of and participation in the relatively small range of occupational choices available to him. When the time came to choose an occupation, if he had a realistic choice other than the family farm or family business, he had only to choose from what was already familiar.

The vocational guidance field appears to have retained a similar concept of vocational choice for nearly a half century; however, since 1950 there has been an increasing emphasis upon the concept that vocational choice is a long range developmental process. Vocational psychologists have always recognized the relative bareness of their explanation of vocational behavior. The involvement of economists, psychologists, sociologists, psychiatrists, and educators in the field of research has led to the formation of a framework for theory building and in a more common language in the field of vocational guidance and counseling.

The concept of vocational maturity is a relatively new one having been defined operationally by Super (1953;20). He describes vocational behavior for the early adolescent as (1) orientation to vocational choice, (2) information and planning, (3) consistency of vocational choice, (4) crystallization of vocational tracts, and (5) wisdom of vocational choice. Crytes (1960;21) views vocational maturity more as a construct and suggested that certain of these dimensions could be analyzed into choice competencies. Super (1960;21) characterized the determinates of career patterns as (1) individual characteristics and experiences, (2) individual personal situation, (3) individual environment, and (4) non-predictable factors. These determinates include attitudes toward work, work values, self concepts, and levels of aspiration as well as intellectual and physical characteristics.

Hoppock (1957;11) indicates that the knowledge of the world of work and work experiences have an influence on the level of occupational aspirations. He suggests that occupational material should be prepared and presented differently at different stages of student development and that early presentation of occupational information may facilitate the understanding of the occupational concepts, identification of vocational interests, realism of self concept, appropriateness of vocational choice, and readiness to function as an effective employee. Occupational information provided early may also reach potential early school leavers and thereby reduce the dropout rate in the high school.

Isaacson (1966;14) states that the high school student inevitably moves toward a view of himself as being against a background of the world of work. Occupational information and career activities must be involved with the traditional information phase and also provide the student with an opportunity to try out his self concept. This exploratory phase, then, should be one of the traditional functions of the high school.

Isaacson goes on to say that . . . . students are typically several years away from making a firm occupational choice since most of the students are becoming concerned with the occupational world as they move toward it. A large portion of youth have had at least casual work experiences and hopefully these contacts lead to increasing awareness of the importance of wise vocational planning.

The program at Huntsville is providing information about the world of work at the elementary level. This information is incorporated into regular classroom activities to help students relate this information to occupations. Students are encouraged and propelled to think about and seek answers to such questions as:

Why do people work? What kinds of work are there in the community? What kinds of work are there in society beyond the immediate community? What kinds of people do the work in the community and the larger society? Why do people go into various kinds of work? What kinds of work do parents of students do? How do people get their jobs? What are the characteristics of people in different jobs? What are the fundamental tools, materials, and processes involved in the work that people do?

In discussing why and how vocational education activities should be extended to the elementary school level, Franks (1965;7) in Summer Study noted that:

> The use of interdisciplinary units, which are rooted in the child's interest and prior experience and by which interest and experience expand, enhance the child's reliance on the use of his own resources and his ability to reason. The child should mainly be answering "How?" and "Why?", rather than "What's", "Who's", and "When?". He discovers the "What's", "Who's?" and "When's?" in trying to explain the "How's" and "Why's". These, by establishing an intellectual framework will enable him to remember the others better.

Orientation, exploration, and relevancy to the world of work for elementary youth was also noted in a program by Hunt (1965;13). She stated after much study and research in the Technology for Children Project that it is a must "that we 'teach' technology in some intellectually honest form" at the earliest possible moment. "The early years are the crucial years." Here, she is suggesting elementary school and maybe even nursery school. The Technology for Children Project was responsible for placing the teaching of technology in many elementary schools in New Jersey today.

Hunt also noted that "research now suggests that children can and are being introduced to concepts at pre-school and school age that were once thought to be strictly the domain of secondary schools and colleges."

The Huntsville project is also providing vocational orientation and exploration throughout the secondary school level. The findings of several studies conducted elsewhere are being incorporated into the program design.

Program activities at the junior high school and high school level, include efforts to provide a smooth transition from the elementary grade level on into the world of work. Additional emphasis upon orientation and exploratory activities in a broad spectrum of the tools, materials, processes, and participants of the world of work is being provided. Learning experiences are being designed to facilitate students' understanding of an industrial and technological society and the occupational, economic, and social consequences of such a society.

The investigator of Project Talent (1968;3) noted that:

> ...a pilot investigation led us to conclude that to meet the needs of prospective vocational education students a guidance system must help these students in educational and vocational planning, interest them in the exploration of the training opportunities for skilled trades, and motivate them to seek information and perhaps pursue enrollment at such institutions.

It further suggests that this be done at the elementary, junior high, and secondary school levels.

In Summer Study (1965;7) there was substantial agreement on a number of basic issues for program development in vocational education. One of these operational aspects evolving from the issues for the Huntsville program is that the junior high activities will evolve continuously and be connected with activities of education in senior high school. There will be no terminal education goals, but rather the programs will provide foundations for continuing education whether it be on the job or in formal post high school curricula.

A program pattern that incorporates ideas and program elements for the project was discussed by Stutz and Merrell (1967;18). The main objectives of the program were to help students to: (1) make realistic career selections, (2) develop skills and competencies useful in a broad spectrum of careers, and (3) develop specific job entry skills.

Stutz and Merrell made extensive use of individual counseling, community resource people, exploratory experiences, work experiences and on-the-job training. The Huntsville project is developing to obtain maximum benefit from these techniques utilizing the student population with the highest number of disadvantaged students in the Huntsville System.

Ertel (1966;6) noted the necessity of occupational orientation at all levels when he stated:

> ... occupational freedom involves both informed choice of alternatives and competence to work effectively. The economy needs constantly larger numbers of workers possessing new capabilities. But youth can only evaluate those occupational choices that they perceive. They are free to perform only the kinds of work for which they acquire competence.

Hudak and Butler (1967;12) reported that a pilot program results indicated that students would increase their capabilities to make appropriate educational and vocational decisions by completing the program.

The Huntsville program is utilizing aspects of the "galaxy" approach to the world of work as reported by Turnquist (1965;22). This program operating in the Detroit public schools consists of three phases.

Phase I (primarily for students in grades seven through nine) consists of preliminary exploratory experiences.

Phase II (grade ten) narrows the field of study to a smaller number of occupations chosen according to the student's interests.

Phase III (grades eleven and twelve) consists of a specific "galaxy" of occupations chosen to provide the students with salable skills.

Ideas and methods used in the Huntsville project also take a cue from DeBlassic and Jones (5) in concluding that:

> "Occupational information is not just a group of pamphlets and books in the library or in the counselor's office. Rather, it is integration of all available appropriate materials into all aspects of the curriculum and total part of the school. Such integration demands that guidance counselors not limit their activities and influence to the counseling office. Counselors must cooperate with teachers and persuade them to incorporate information in their courses and other school activities."

The Huntsville project is also utilizing several operational aspects of the Paola Pilot Project (1967;24) especially in the area of guidance and counseling. The Paola Project describes the successful development and use of materials and methods to be used in an interdisciplinary and unified program of vocational education for juniors and seniors. Guidance, career information, work attitude development, and world of work investigation were the successful features of the Paola Project that are being integrated into the Huntsville Project.

In addition to the occupational orientation and the guidance and counseling functions for all students the proposed Huntsville project is attempting to provide instruction for the full spectrum of employment opportunities. Most of these are being offered through on-campus and community work experience programs, at the upper junior high level and community work experience and cooperative education for senior high school students. Special programs are being provided for those students who are academic, socio-economic or otherwise handicapped and students not previously enrolled in Vocational Education. Special effort is being made to encourage potential dropouts to stay in school and to get dropouts back into vocational programs and provide them with an opportunity to develop a salable skill, and proper job attitudes to be successful in the world of work.

In the case of the potential dropout a special effort is being made to help the student see the relationship between the academic instruction and occupations. Since these students may be entering the labor markets with a more limited educational background and with fewer basic skills than most other workers the proposal will allow them to capitalize upon whatever assets they have. Proper attitude development is another critical area the Huntsville project is attempting to capitalize on for this type student also.

Elements from pilot training programs for alienated youth (1968;25) are being used as a pattern for the project. Skills necessary for available job opportunities, and activities effect behavioral changes through a program of guidance and counseling, and academic instruction will be provided so that these students may acquire the personal characteristics needed for their role as productive adults and responsible citizens.

Each student's interests and needs will be studied and a program of vocational training suited to his particular abilities hopefully can be developed. This analysis of an individual's attitude, interest, personality is hoped to be a point of departure in assisting the student in analyzing himself in relation to the world of work.

An evaluation report Neighborhood Youth Project by Aller (1967;1) indicates if programs keep youth of low income families in school and encourage out-of-school youth to return to school they should:

1. Provide training-related jobs and fewer of the menial variety; and

2. Increased counseling services.

Kaplan (1967;15) also reported success in a program to design demonstration occupational training centers for 16 and 18 year old potential or actual dropouts. Methods used in the centers were intensified training, work experience, and cooperative education.

Havighurst and Stiles (1961;9) reported that . . . . "The work-experience program, as applied to potential dropouts, is a significant education instrument to return "alienated youth", those who "have quit learning and have dropped out of school psychologically two or three years before they drop out physically."

Savityky (1962;17) after much work in many programs observed that:

> ... There had been undue emphasis on the necessity to structure work-experience programs for potential dropouts for skill training in specific jobs, especially the less demanding, low-level occupations. This has, in part, been responsible for either shunning, or accepting grudgingly, placements which appear unattractive or have no future; e.g., messenger work. This development loses sight of the fact that the potential dropouts in work-experience programs are troubled with problems growing out of maladjustments, many bearing the scars of negative environmental factors such as broken homes. Their confusion and malaise have not, at the point of joining the class, cleared sufficiently to make a decision as to job preference, training and vocational choice. For many, their lack of competency and ambition is not due to innate intellectual inadequacies but to a temporary malfunction for reasons which have already been indicated. Their immediate needs are for large- scale changes which will restore their sense of belonging and for opportunities to experience success, so that they can later transfer to, and rejoin, the normal track of schooling without additional props or enter the world of work far better equipped educationally and socially. The job experience is a tool, one of the tools, to help achieve this rehabilitation. It is a laboratory for learning the dignity of all work, how to hold a job, and how to accept responsibilities. Work habits and attitudes become all important, especially since findings by Menninger and others have shown that more than 70 percent of persons discharged from employment are dismissed because of personality and social inadequacies.

Work experience will not be only for the potential dropout or handicapped in the proposed project. Two hundred and fifty work stations in the Huntsville area had already been identified for work experience and cooperative education programs when the proposal was first developed. Due to economic conditions in the Huntsville area, this is almost nil. However, much effort is being spent to locate training stations for students because this is deemed a necessary phase of career development for this student population.

Beam and Clary (2) stated that ... "there is no way for a person to be certain that he has chosen the right occupation until he has actually worked in it long enough to find out for himself." A California Evaluative Study Committee (1969;26) on work experience concluded that the primary purpose of work experience education was to provide a sound basis for an informed career choice. They further suggested that a prerequisite for work experience was adequate vocational guidance prior to placement in the training station.

Aller (1967;1) found in working with the Neighborhood Youth Center evaluation that work-experience programs were an asset in allowing youth to test job interests in an urban environment.

Cooperative education at the senior high level will also be a part of proposed project. Marks (1963;16) notes that cooperative education is a positive means by which we may bring relevancy into the curriculum. He states:

> ... occupational experiences are a significant part of learning activities planned by the distributive education teacher coordinator. They are school-connected, deriving their educational value from the effectiveness of their coordination with classroom experiences. Their purpose is the development of individual capacities and competencies needed for the ultimate achievement of career goals.

Another planned element of the Huntsville project is specific training for job entry skills for those students not previously enrolled in vocational programs just prior to the time these students leave school. This project element is still in the developmental stages but it is felt that this element can add much to the comprehensive career development program.

Intensive occupational guidance and counseling during the last years of school will be provided. Initial placement and follow-up of all students will be done at the completion of their schooling. Several successful pilot projects associated with the aforementioned elements have been conducted through the U.S. The successful aspects from these projects will be included in the Huntsville project.

Sullivan and Mandell (1967;19) reported much success in a short term education and training program for the operators of automatic data processing machines. Intensive guidance and counseling activities toward the end of the program were beneficial.

The New Careers Development Center (1967;23) reported success in a three-phase program designed for the rapid training of nonprofessionals for entry level civil service positions. Trainees were employed on a part-time basis during the training period by the police, health, and welfare, inspection, and housing and relocation department. In Phase I, trainees were required to perform useful elementary tasks on the job for a four-week preservice period. Phase II consists

of a four-week transition period during which the trainee works one-half day of each day and devotes the other half to discussing his on-the-job experiences and problems. In Phase III, the trainee receives special training one day per week in addition to daily supervision on the job for the balance of the program.

Work Instruction for the Food Services Industry (1963;27) was a program to develop learning media for communicating task methods to employees. The media used consisted of a step-by-step procedures on colored 35mm slides. It was reported that this pictorial type of program was more effective than spoken or written words. It was further noted that it is especially effective for employees with lower levels of verbal and reading skills.

Grissman and Densley (1969;8) when discussing placement activities of programs emphasized that ". . . . placement studies may determine weakness of a program." Therefore, placement is an important element for formative and summative evaluations. Hoerner (1968;10) found in a study that ". . . . the counseling treatment was found to significantly affect (1) the subject's obtaining bona fide and legitimate jobs, (2) the number of weeks it required subjects to get such jobs, and (3) the percent of time subjects held such jobs."

B. Objectives

The central purpose of this program is to package and demonstrate in one operational setting those practices found effective in other isolated pro rams. More specifically, the project objectives are:

1. To provide an integrated occupational orientation program at the elementary and secondary level to broaden the experiences of students.

2. To provide guidance and counseling services at the secondary school level necessary to assist students in appraising their current interest, aptitudes, skills, and personalities in relation to their occupational preferences.

3. To provide vocational programs to assist every school terminee, with special emphasis upon those with academic, socioeconomic and other handicaps, in developing basic understandings, skills and abilities needed for job entry and/or continuing education in the areas of the student's occupational choice.

4. To provide extensive student personnel services, including guidance, counseling and placement, for each school terminee.

C. Description

1. General Design

Acceptance of the concepts of occupational choice and vocational maturity as a process which begins early in childhood and continues well into adulthood indicates a need for a comprehensive occupational education program with structure, content, and processes which will provide students with occupational information,

guidance, and learning experiences at appropriate times as they move toward vocational maturity and the transition from school to work.

The design for this project is conceived as an integrated vertical structure of three levels of activity which coincide with the elementary, junior high, and senior high school organizational pattern of Huntsville City Schools (Figure 1). There are planned coordination of services within and between levels of this program and with other programs in the seven schools involved.

At the elementary school level, development of an awareness of and acquisition of general information and understandings about the world of work is the most important aspect of development of occupational choice and vocational maturity (Super, 1953;20). This is being accomplished by making occupational information and exploratory activities an integral part of the overall pattern of learning activity in the fourth, fifth, and sixth grades. A resource teacher and a teacher aid assists classroom teachers in developing appropriate content and processes. All occupational information activities are coordinated through the teacher-counselor at this level. The activities are being developed with the intent of changing teacher attitudes in hopes of having the occupational information phase of the project become an established and continuing process in the elementary school curriculum.

At the junior and senior high school levels, a variety of occupational information, exploratory, training, and counseling services are being provided and coordinated within and between levels. For most students, occupational education activities in the seventh grade are a transition from broadly-based activities in the elementary school to progressively more specific activities at the high school levels.

Seventh grade students are participating in an occupational information and guidance program, where they investigate the tools, materials, and processes of a broad spectrum of occupational groupings. Through this activity, supplemented by interest inventories, aptitude testing and counseling, students are being assisted in recognizing their individual patterns of interests, skills, and aptitudes, and are encouraged to relate these to broad occupational groups.

At the end of the eighth grade many students will move into work experience programs. The emphasis here is upon further exploration and definition of occupational interests rather than upon development of specific job competencies. Seventh and eighth students are being exposed to many activities to enhance proper attitudes and develop healthy self concepts.

At the senior high school level, students will have an option of intensified training, preparatory training in specific occupational areas, cooperative part-time training or some combination of these.

Early identification of students who are academically or socio-economically disadvantaged, handicapped, and/or are potential dropouts is being practiced; and these students are being provided with additional guidance and counseling services. With the variety and possible combinations of services to be offered within the junior and senior high school levels, it is expected that with special considerations most of these students can be appropriately placed in the regular occupational education course offerings.

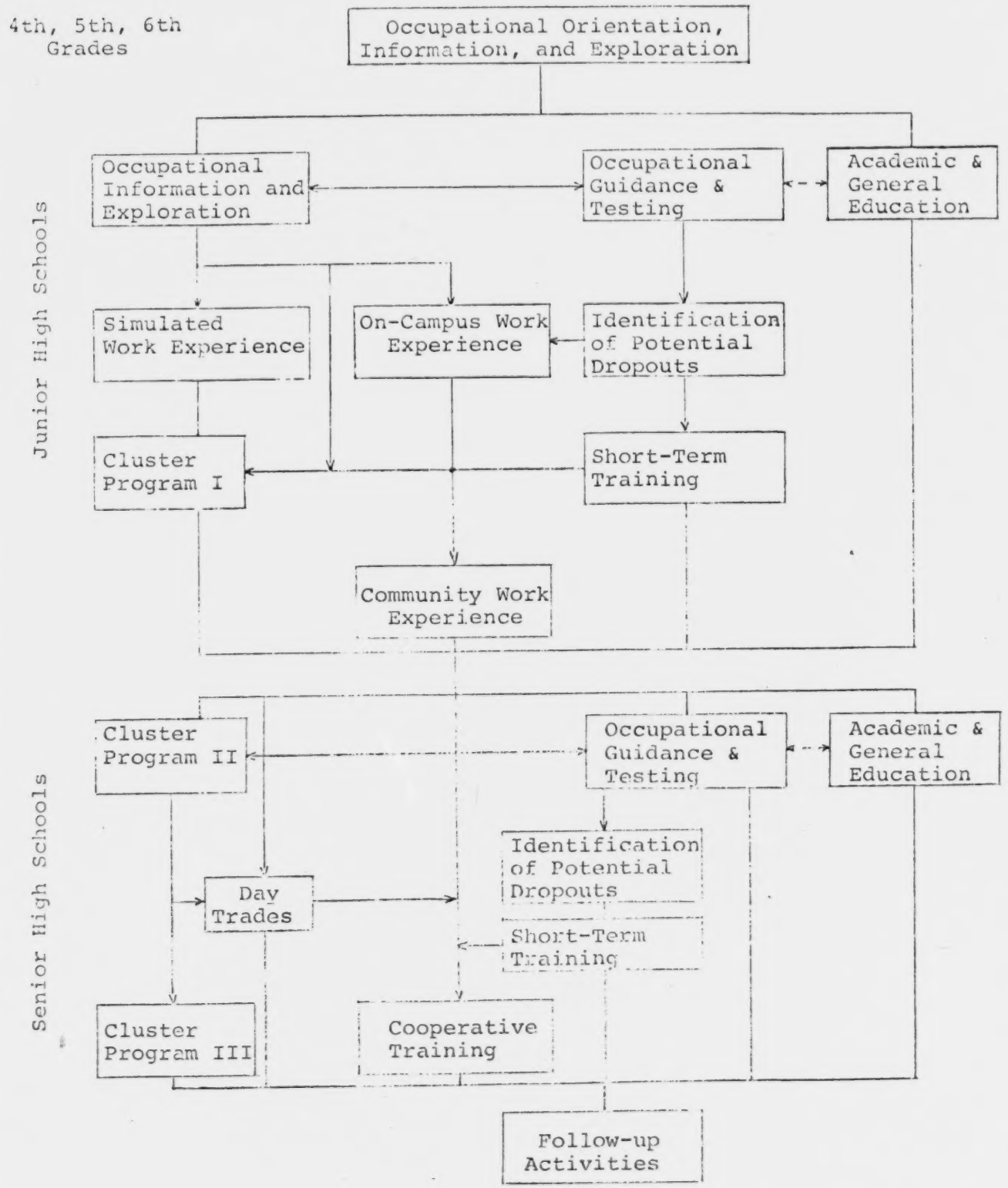

4th, 5th, 6th Grades
Occupational Orientation, Information, and Exploration
Junior High Schools
Occupational Information and Exploration
Occupational Guidance & Testing
Academic & General Education
Simulated Work Experience
On-Campus Work Experience
Identification of Potential Dropouts
Cluster Program I
Short-Term Training
Community Work Experience
Senior High Schools
Cluster Program II
Occupational Guidance & Testing
Academic & General Education
Identification of Potential Dropouts
Day Trades
Short-Term Training
Cluster Program III
Cooperative Training
Follow-up Activities

Figure 1

Work experience situations on-campus or in selected establishments in the community are being provided for students who need financial assistance to remain in school, or who can otherwise profit from the experience. Next academic year, students whose proneness to drop out seems irreversible will be provided short-term intensified training in selected occupational areas; therefore, providing them with at least minimal employment skills before they sever their connection with the school. Some potential dropouts who complete this intensive training may be induced to remain in school and apply their skills in a work experience or cooperative training program.

Short-term intensive training and cooperative part-time training also provides occupational education opportunities for students who are not dropout-prone, but who have not had previous training and wish to develop salable skills prior to graduation.

2. Schools or Locations

Four elementary schools, Cavalry Hill, Fifth Avenue, Terry Heights, and West Huntsville, along with two junior high schools, Cavalry Hill Junior High and Stone Junior High, and one senior high, Butler High School, were selected for the Huntsville program. These elementary and junior high schools were selected because they represent the major portion of the student population that feeds into Butler High School. In this Model City area, these schools also represent the largest percentage of socioeconomic, academic, and other handicapped students.

The facilities of the Vocational Technical Center (secondary level area vocational school) are being utilized in the project.

3. Participants

At present most students in grades 4 through 6 are participating in an integrated occupational orientation program (occupational information and exploratory activities). This phase of the program is now reaching approximately 1,088 students, of which 65 percent are classified as socioeconomically handicapped. This percentage varies from 34% in one school to 85% in another school.

All students in the two junior high school programs are participating in the guidance and counseling service programs which include the study of broad occupational groups. Approximately 660 students are involved in several types of exploratory activities in this phase of the program. Many potential school terminees and over-age youth, as identified by the counseling services and teacher referrals, are involved in work experience programs which will lead to job placement or cooperative education programs.

No personnel has yet been assigned to work with students and teachers at Butler High School. A work experience coordinator has been located and will be assigned to this task February 1, 1972.

4. Instructional Staff

Teacher/Counselor - Elementary Level	- Mrs. Nina Hoop
Teacher/Counselor - Junior High Level	- Mrs. Ethel Bradford
Teacher/Counselor - Junior High Level	- Miss Jessie Conn
Instructor - Industrial Arts or Basic Vocational	- Robert G. Bradshaw
Teacher Aide	- Mrs. Pearlie Draper
Teacher Aide	- Mr. Randall Higgins

TO BE HIRED:

Instructor - Industrial Arts or Basic Vocational	
Coordinator - Work Experience	
Project Coordinator -	- To Be Designated (Not Mr. W. M. Clark as listed in the original proposal. Mr. Ben Garmon serving part-time.)

5. Methods and Materials

Prior to initiating the instructional program, an in-service training program was conducted for the purpose of faculty orientation and professional development. Planning sessions have begun for planning, discussing problems, and coordinating each facet of the program.

The Technology for Children Projects (1965;13) course of study is being utilized for exploratory experiences at the elementary grade levels.

This project is adapting and utilizing the methods, at all grade levels, discussed by Stutz and Merrell (1967;18). The use of resource people for the guidance information and field trips into community business, as well as visits to the schools, are included in the program.

Job attitude and occupational orientation materials developed in the Paola Pilot Project (1967;24) are being adapted and used in the project. These materials are being integrated into the regular programs already offered and the intensified programs to be developed.

The intensified training methods will be derived from the procedures illustrated in the occupational training centers discussed by Kaplan (1967;15). The New Careers Centers (1967;23) concept for rapid training of non-professionals in Phases will be incorporated into this program. This method will be beneficial in revitalizing student interest and motivating him to re-enter the regular vocational programs.

Individualized instruction as used in the pilot project (1968;25) and the communicate task methods used in the Work Instruction for the Food Services Industry (1963;27) is being expanded and utilized with handicapped students.

The work experience phase of the project is developed to coincide with those developed in the Neighborhood Youth Center (1967;1).

All materials developed in the project are still in the testing stage. Publication and dissemination of materials will not be attempted until all materials have been field tested.

D. Results and Accomplishments

1. Many students at the elementary and junior high levels have been exposed to occupational information that should assist them in making more realistic career choices when the time comes.

2. Many teachers in the elementary and junior high schools are developing more positive attitude toward the career development program and many have already integrated the occupational information into their own curriculums.

3. Many disadvantaged students have been placed in employment or work experience situations as a direct result of the projects.

4. Observable attitudinal changes have been made in many students involved in the program.

5. Lines of communication have been established and cooperative activities initiated with many other governmental and community action agencies. Excellent working relationships exist with Model Cities and other governmental agencies, social and lay organizations.

6. Curriculum materials are being field tested and revised before publication and dissemination.

7. Data gathering for the summative evaluation has been initiated.

8. Many students have been held in school already as a direct result of guidance and counseling by the exemplary staff.

9. The exemplary staff have become and accepted members of each participating school. Success in this phase is felt due to the philosophy and approaches taken to insure that the project becomes an integral part of each school curriculum.

10. Excellent plans have been initiated in the utilization of resource persons in the educational process of career development.

11. Personnel with excellent qualifications and attitudes have been selected to work in the program.

E. Evaluation

The staff members of the Occupational Research Development Unit of Auburn University are assuming the major responsibility for directing the evaluation of the program. The ORDU staff has established evaluative criteria and is coordinating the development of additional tests, developing data collection procedures and instruments, and collecting and analyzing data pertaining to the operation of the program.

The program evaluation model (Figure 2) is a graphic representation of the sequence and principal factors which will be considered in the formative evaluative process for the project. Steps 1 through 7 represent the sequence and factor for conventional program evaluation. Steps 8, 9, and 10 adapt the model for use in exemplary programs and provide feedback and corrective action.

Summative evaluation will consist of determining the extent to which students exposed to the proposed program have:

Objective 1 ... increased their knowledge up to or above a predetermined level as measured by pre- and post-administration of teacher constructed examinations.

Objective 2 ... made realistic occupational preferences as indicated by a comparison of counselor assessment prior to enrollment in programs, counseling and student follow-up activities, and measurement by the Minnesota Satisfaction Questionnaire.

Objective 1 and 2 ... developed greater vocational maturity as measured by pre- and post-administration of the Attitude Test of the Vocational Development Inventory.

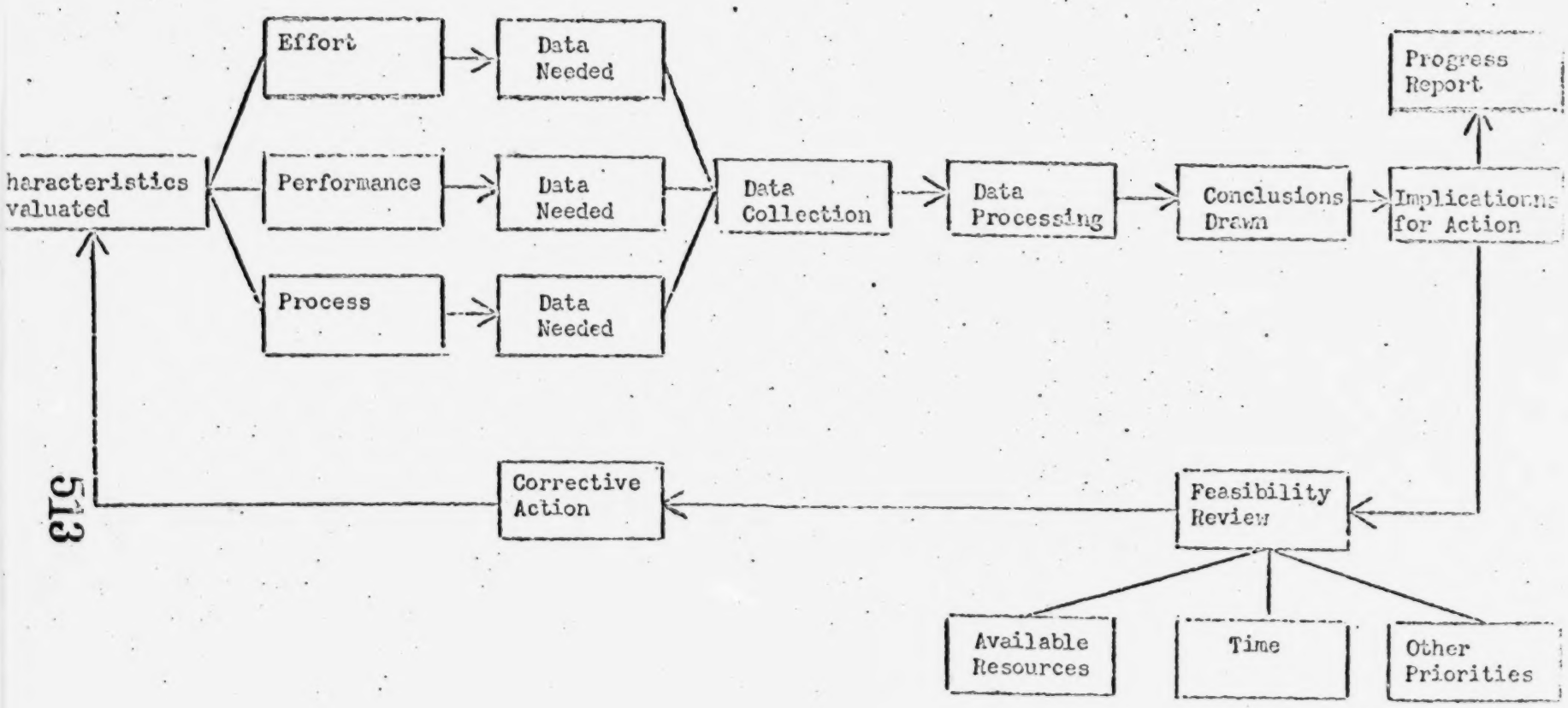


Figure 2 - Program Evaluation Model

Objective 2 and 3 ... developed a salable skill in the occupation of their choice as measured by the Minnesota Employment Satisfactoriness Questionnaire after one month of employment.

Objective 4 ... have had a minimum of four individual counseling sessions before terminating their schooling as measured by 10 percent random selection of 11th and 12th grade program enrollees.

Objective 5 ... have had a minimum of four individual counseling sessions before terminating their schooling as measured by 10 percent random selection of 11th and 12th grade program enrollees.

The Data Matrix for gathering data for the summative evaluation is included as Appendix A.

The third parties progress and evaluation report is attached as Appendix B in this report.

F. Conclusions, Implications and Recommendations

1. Conclusions

Based upon the experiences already gained in the project and the local constraints in the Huntsville setting the following conclusions have been drawn, at this time frame, for the project.

a. The project design is one of the most efficient and effective designs for the implementation of a career education program.

b. The staff members who have been selected are extremely competent and should facilitate meeting of project objectives most effectively.

c. A program as massive as the Huntsville Project definitely needs a full-time project-coordinator who has the major responsibility for the project.

d. A sound foundation has been developed to the present time to further ensure a successful project.

e. Excellent cooperation between many governmental and social agencies has added many benefits to the project. Opportunities now exist to assist students in career development that would never have been possible and many other opportunities are developing.

2. Implications

From the one year of involvement in the project the following implications seem apparent:

a. The project design is transferable to most school systems with a minimum of alteration.

b. If project is deemed a success it offers much to the education process of career development for the disadvantaged.

c. Methods and materials developed and utilized in the project can provide a basis for other school systems to initiate career education curricula at a minimum tooling-up cost.

d. When more continuity is developed in the project and students have the opportunity to complete the program they should be better able to make rational career choices. This should cause reduced anxiety in people which should lead to better citizens, better parents, better neighbors, and more productive individuals.

3. Recommendations

A major justification for the Huntsville project was to develop and implement a comprehensive occupational education program for the elementary and secondary school utilizing a largely disadvantaged population. This was to be the tooling-up phase for a total career education program that would better serve the needs of the nation and its citizens. At this point in time the following recommendations are made:

a. Fundings of projects and project starting times should coincide with the academic year in school systems whenever possible.

b. Strong leadership from the superintendent and other administrators in a school system is necessary for career education to be a success. Vocational educators cannot carry out a total career education program in a school system.

c. Materials should be thoroughly field tested before they are published and disseminated. Publishing and disseminating for their sake alone may reduce or slow down the transferable process.

d. The use of consultants can be a valuable motivational tool for staff members and they should be brought in periodically.

e. To be effective and maintain longevity the changing of the school curriculum to approach a career education concept should never be a forced act in a school system. Proper teacher attitudes are a must and the introduction and initiation phase must be a slow and diligent process.

APPENDIX A

EVALUATION DATA MATRIX #1

1	2-5	6-8	9-11	12	13	14	15	16	17	18-20	21	22	23	24
Name of Student	Student Number	Occupational Information Scores		Realistic Occupational Preferenced Assessment										
		Pre-Test	Post-Test	Counselor		Instructor		Other Findings*		Minnesota Satisfaction Questionnaire Source	Assessment based on Minnesota satisfaction questionnaire		Conclusion by the Evaluation Team	
				Yes	No	Yes	No	Yes	No		Yes	No	Yes	No

*Other findings during placement and student follow-up activities are to be attached to instrument when a no is recorded.

EVALUATION DATA MATRIX #2

1	2-5	25-26	27-28	29-30	31-32	33-35	36-37	38	39
Name of Student	Student Number	Test Scores on Vocational Development Inventory				Minnesota Employment Satisfactoriness Questionnaire Score (conducted one month after employment)	Number of Individual Counseling Sessions	Employment Status (Two weeks after program termination)	
		Maturity		Development					
		Pre-Test	Post-Test	Pre-Test	Post-Test			Employed	Unemployed

EVALUATION DATA MATRIX #3

1	2-5	40-42	43-45
Name of Student	Student Number	Standardized Measurement in Students Major Area	
		Pre-Test	Post-Test

EVALUATION DATA MATRIX #4 FOR ELEMENTARY SCHOOLS

School _____

Number of Students

_____ 4th grade

_____ 5th grade

_____ 6th grade

Number of Sections

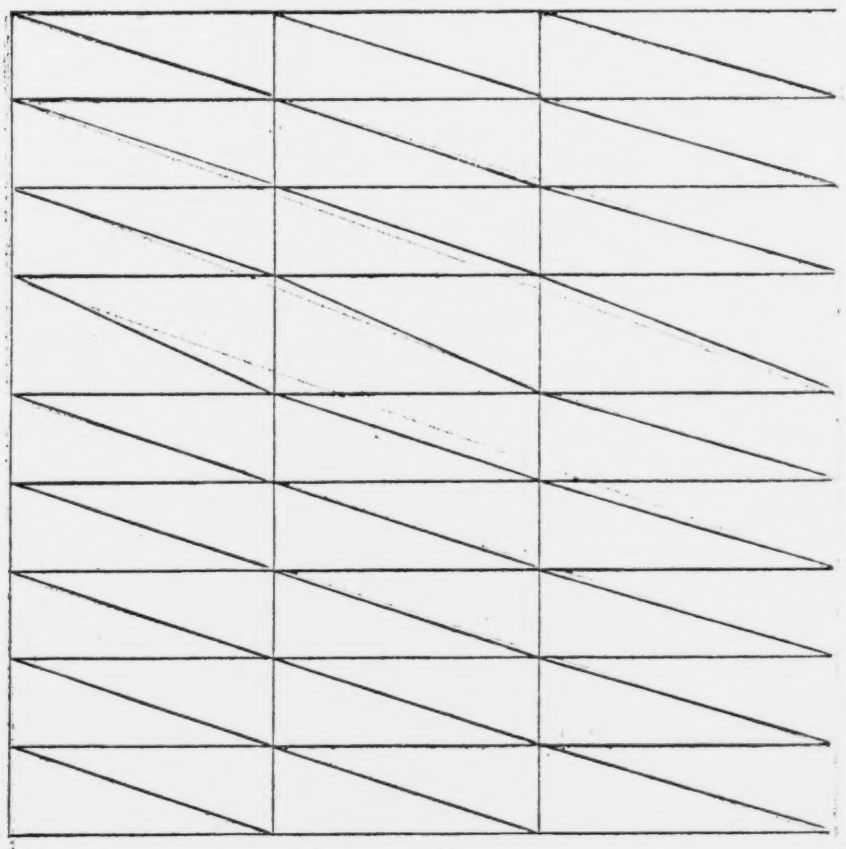
_____ 4th grade

_____ 5th grade

_____ 6th grade

Number of Sections by Grade Levels Who Were Exposed to Occupational Information Units

Occupational Information Units Taught by DOT Divisions in Each DOT Category



Professional, Technical, and Managerial

Clerical and Sales

Service

Farming, Fishery, Forestry, and Related

Processing

Machines Trades

Bench Work

Structural Work

Miscellaneous

*See example on back

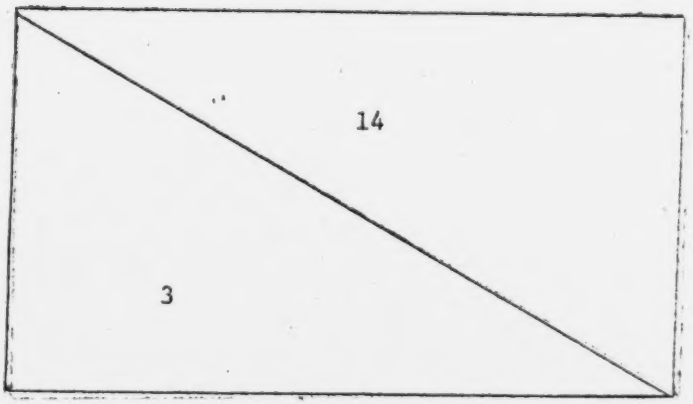
EXAMPLE FOR DATA MATRIX #4 FOR ELEMENTARY SCHOOLS

4th Grade

Example: If there are eight sections of the fourth grade in one school and only two sections were exposed to the DOT Division of Medicine and Health, eight sections to the Live Science occupational division and four sections exposed to the Education occupational division, then fourteen would be placed in the top triangle.

Example: Enter the number of different types of units taught in the category of Professional, technical, and managerial occupations listed in the DOT. (The different type of units may be taught according to the occupational divisions listed in the DOT)

If only occupations in Medicine and Health, Live Science and Education were taught, then three would be entered in the lower triangle.



APPENDIX B

COMPREHENSIVE OCCUPATIONAL EDUCATION PROGRAM FOR THE ELEMENTARY AND SECONDARY SCHOOL

(VOCATIONAL EXEMPLARY PROGRAM)

Progress Report
January 1971
through
December 1971

Huntsville City Board of Education
Huntsville, Alabama

COMPREHENSIVE OCCUPATIONAL EDUCATION PROGRAM
PROGRAM FOR THE ELEMENTARY
AND SECONDARY SCHOOL

Progress Report
January 1971
through
December 1971

Prepared by

Occupational Research and Development Unit
Auburn University
Auburn, Alabama

INTRODUCTION

Vocational education shares with all other educational activities in the schools a responsibility for assisting youth with the inevitable problem of transition from school to employment. This transition may occur prior to graduation (as in the case of dropouts), upon graduation, or may be postponed by further educational experiences at the post-high school level. The essential points are that the transition does occur and the schools have a responsibility for making it effective.

The central tenet of this project is expressed in six foundation statements for directing innovated thinking and the adoption of proven practices for more effective vocational education programs.[1]

The statements are as follows:

1. Accessibility to quality vocational education programs;

2. Programs to meet the full spectrum of capabilities of youth and adults;

3. Coupling vocational and general education as integral parts of a common core within a total educational program;

4. Open-ended continuous vocational education and training opportunities;

5. Early orientation to vocational education through exploratory occupational experiences in a setting where the traditional division of education into separate educational subject disciplines is replaced by an educational "mix" starting in the elementary school; and

6. Instructional flexibility to prepare students for adaptation to constantly changing employment patterns.

The underlying concept of this project is that vocational choice and preparation is a continuing process which spans a long period of time and requires a concerted effort by educators to develop a process by which a student can realistically select and attain success in a given vocation.

The program involves the utilization of the elementary teachers, grades 4-6, the junior high school teachers, the vocational personnel, counseling services, and facilities of several schools in the Huntsville School System.

---

[1]Frank, N. H., The Summer Study of Occupational Vocational and Technical Education, (Cambridge, Mass.: Massachusetts Institute of Technology, 1965).

The results of this project have implications for the implementation of similar approaches in solving vocational problems at the local, state, and national levels.

OBJECTIVES

The central purpose of this program is to package and demonstrate in one operational setting those practices found effective in other isolated programs. More specifically, the project objectives are:

1. To provide an integrated occupational orientation program at the elementary and secondary level to broaden the experiences of students.

2. To provide guidance and counseling services at the secondary school level necessary to assist students in appraising their current interest, aptitudes, skills, and personalities in relation to their occupational preferences.

3. To provide vocational programs to assist every school terminee, with special emphasis upon those with academic, socio-economic and other handicaps, in developing basic understandings, skills and abilities needed for job entry and/or continuing education in the areas of the student's occupational choice.

4. To provide extensive student personnel services, including guidance, counseling and placement, for each school terminee.

GENERAL DESCRIPTION

Acceptance of the concepts of occupational choice and vocational maturity as a process which begins early in childhood and continues well into adulthood indicates a need for a comprehensive occupational education program with structure, content, and processes which will provide students with occupational information, guidance, and learning experiences at appropriate times as they move toward vocational maturity and the transition from school to work.

The design for this project is conceived as an integrated vertical structure of three levels of activity which coincide with the elementary, junior high, and senior high school organizational pattern of Huntsville City Schools. There is and will be further planned coordination of services within and between levels of this program and with other programs in the seven schools involved.

At the elementary school level, development of an awareness of and acquisition of general information and understandings about the world of work are the most important aspects of developing occupational choice and vocational maturity. This will be accomplished by making occupational information and some exploratory activities integral parts of the overall pattern of learning activity in the fourth, fifth, and sixth grades. A resource teacher assists

classroom teachers in developing appropriate content and process. The resource teacher also does some demonstration teaching to assist the other teachers in adopting these new approaches. Most of the exploratory phases of the program had to be dropped due to a reduction in funds.

At the junior and senior high school levels, a variety of occupational information, some exploratory training, and counseling services are to be provided and coordinated within and between levels. For most students, occupational education activities in the seventh grade will be a transition from broadly-based activities in the elementary school to progressively more specific activities at the high school levels.

Seventh grade students will participate in an occupational information and guidance program, where they will investigate the tools, materials, and processes of a broad spectrum of occupational groupings. Through this activity, supplemented by interest inventories, aptitude testing and counseling, they will be assisted in recognizing their individual patterns of interests, skills, and aptitudes, and encouraged to relate these to broad occupational groups.

It is anticipated that by the end of the eighth grade most students will move into broadly based cluster programs or work experience programs. The emphasis here will be upon further exploration and definition of occupational interests rather than upon development of specific job competencies.

At the senior high school level, students will have an option of advanced preparatory training in specific occupational areas or cooperative part-time training or some combination of these.

Early identification of students who are academically or socio-economically disadvantaged, handicapped, and/or are potential dropouts is being practiced; and these students are provided with additional guidance and counseling services. With the variety and possible combinations of services to be offered within the junior and senior high school levels, it is expected that with special considerations most of these students can be appropriately placed in the regular occupational education course offerings.

Work experience situations on-campus or in selected establishments in the community are being provided for many students who need financial assistance to remain in school, or who can otherwise profit from the experience.

In summarizing, the problem to which this project is addressed is that of designing and installing in the Huntsville City Schools a comprehensive program of occupational information, vocational counseling, and vocational instruction which will effectively create a bridge between school and work for young people. The proposed services will extend from the elementary through the high school level for youth of all ages and abilities, with particular emphasis upon youth with academic, socio-economic, or other handicaps.

This is being accomplished by redirecting some present programs at the high school level and implementing new programs of occupational information, occupational orientation, counseling, vocational preparation, and placement.

REPORT SUMMARY

The Huntsville School System has had constant interruptions in all of its educational programs. In complying with desegregation guidelines many schools have been closed and faculty and students have transferred from one location to another causing overcrowding in most cases. Some disruptions have occured as a result of student disorders. Many students were transferred to as many as four schools the past academic year.

The death of the superintendent during this time added to the loss of continuity in the total education program.

At present, few long range plans can be made by the vocational personnel there because schools, school zones, students, and faculty are constantly changing. One of the participating schools with an extremely high percentage of disadvantaged students has had transfer requests from 80 percent of its faculty and finally had a 50 percent turnover during the summer months.

This project was not funded until November, 1970, and the first personnel was not hired until January, 1971. Location of qualified personnel for the project has been a major problem for the Project Director and as yet all personnel have not been hired.

With this setting in mind, the most significant evaluative findings by the review team from the Occupational Research and Development Unit at Auburn University were as follows:

1. Personnel with excellent attitudes and qualifications have been employed for the project.

2. The additional qualified staff, especially the Project Coordinator, for the project need to be employed as soon as possible.

3. Teacher-Counselors seem to have developed good rapport with teachers in the schools in which they are to coordinate activities. The elementary Teacher-Counselor has taught several demonstration classes, conducted some inservice training programs for other teachers, and developed many materials for teachers to incorporate into their programs.

4. The services of a Project-Coordinator, as identified in the proposal, could not be obtained because the City Board would not agree to pay the salary suggested in the proposal since it was some higher than the regular salary schedule. A project-coordinator has still not been hired.

5. Business and industry needs to become more involved in program development.

6. One complete industrial arts facility that was scheduled for use in the project was closed to meet desegration requirements and is now sitting idle. No space exists at any other participating school to utilize the industrial arts equipment.

7. The Project Director and Teacher-Counselors have made excellent plans for administering the program and had begun to initiate those plans at the end of the academic year. Little skepticism is evident about the possibilities of success for the program.

8. Many materials have been developed for use by the teachers in the participating schools.

9. The junior high Teacher-Counselors are doing an excellent job in working with other community action agencies in the placement of many disadvantaged students in work experience situations. Much time has been devoted to this phase of the program in hopes of having the school looked at as a place one goes to obtain employment.

10. Teacher-Counselors are constantly searching the literature for new and tested approaches to solving educational problems.

11. Teacher-Counselors should be provided with some additional inservice training in assisting students and teachers in the evaluation of test batteries to be given in terms of occupational choices. An inservice program has been planned in early fall for this purpose.

12. Little evidence exists that the Exemplary Project has been actively publicized and promoted locally and statewide.

13. The Project Director and Teacher-Counselors have developed the philosophy that if the Exemplary Project is to be a continuing success teacher attitudes and teaching methods must change. They realize that with such a small staff they cannot make an impact on the student population unless they assist all the other teachers in adopting new techniques. It is their hope that these new techniques for dealing with educational problems will continue long after the funds for the Exemplary Project have ceased.

PROCESS COMMENTS OF PROPOSAL OBJECTIVES
ACCOMPLISHMENTS AS RELATED TO PROGRAM OBJECTIVES

Objective I --To provide an integrated occupational orientation program at the elementary and secondary level to broaden the experiences of students.

Comment -- An excellent beginning has been made in the development of an integrated occupational program at the elementary and secondary level. At present, the elementary phase of the program is more advanced than the secondary phase. The Teacher-Counselors have spent considerable time in developing rapport with other teachers in the participating schools. This will greatly assist them in working toward the program objectives early in the next academic year. As yet, only a few students have been exposed to the occupational information but an excellent foundation has been developed to meet the criteria for Objective 1.

Objective II --To provide guidance and counseling services at the secondary school level necessary to assist students in appraising their current interest, aptitudes, skills, and personalities in relation to their occupational preferences.

Comment -- A commendable start has been made in providing guidance and counseling services at the secondary school level necessary to assist students in appraising their current interest, aptitudes, skills, and personalities in relation to their occupational preferences. Most tests for the testing program have been selected. An inservice training program has been planned for the winter to assist the Teacher-Counselors in aiding teachers and students to better interpret the test battery in terms of career choices. Many materials have been developed to assist the teacher-counselors with their guidance activities. The Teacher-Counselors have spent considerable time with school records to learn about the student population in each school. At the end of the academic year the Teacher-Counselors had begun to make many student contacts. The testing schedule to complement the counseling activities is being planned and administered.

Objective III--To provide vocational programs to assist every school terminee, with special emphasis upon those with academic, socio-economic and other handicaps, in developing basic understandings, skills and abilities needed for job entry and/or continuing education in the areas of the student's occupational choice.

Comment -- The Huntsville System is continually seeking funds to provide a comprehensive vocational program in the system. Much time is spent in identifying youth with academic, socio-economic and other handicaps in hopes of assisting these youth in developing basic understandings, skills, and abilities needed for job entry and/or continuing education in the areas of the student's occupational choice. The Huntsville Vocational Center offers a comprehensive vocational program and each student in the system visits the school at an early age to illustrate the many career choices in which training is available to them. The Teacher-Counselors are assisting in the identification and special recruitment of disadvantaged students for the vocational programs.

Objective IV --To provide extensive student personnel services, including guidance, counseling and placement, for each school terminee.

Comment -- The Teacher-Counselors at the secondary level have spent considerable time with many other community action agencies in searching for and placing of students, especially disadvantaged students, in work experience situations for the summer. This is a well-planned and coordinated phase of the summer. This is a well-planned and coordinated phase ofthe student personnel services. Guidance sessions have been conducted to assist the students in filling out interview forms and explaining work expectations on the job. Many counseling sessions have been held to encourage students, who have not developed work values, to remain in their work experience programs. The staff has a commitment to place every school terminee in permanent employment.

REVIEW TEAM EVALUATION INSTRUMENT

EVALUATION INSTRUMENT FOR EXEMPLARY
PROGRAMS IN VOCATIONAL EDUCATION

School or School System Huntsville System

School year 1971 Year of operation First

Program Title: Comprehensive Occupational Education Program for the Elementary and Secondary School

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
A. Administration and Supervision	1. Responsibility for the program is functionally assigned to one individual.				X				The Vocational Director has full responsibility for the program at present.*
	2. Teachers and counselors have completed self-appraisal instruments for their respective programs.	X							
	3. Students are following their planned courses of study.	X							
	4. Teachers have teaching plans for each unit of instruction included in programs.				X				
	5. Program is being promoted with school faculty, students, parents and community groups.								Project Director and Teacher Counselors have discussed the program with many faculty, civic and other social agency groups. One local television program has given time for discussing the program.

Comments by administrators, teachers and/or students:

*The services of the Project Coordinator, identified in the proposal, could not be obtained because the City Board would not agree to pay the salary suggested in the proposal because it was somewhat higher than the regular salary schedule. No project coordinator has yet been hired. Along with excellent personnel that has been hired a project coordinator could contribute greatly to the success of the project. The Assistant Superintendent has promised to give assistance in securing a project coordinator.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
A. Administration and Supervision (Cont'd.)	6. Program results are being coordinated and disseminated.								
	7. School is involving business and industry in program development.				X				Several business and industrial groups are involved in different phases of the total vocational program. Excellent working relationship exists with business and industry. Possibility more involvement of business and industry in this project could lend to a more effective program especially in the placement of students.
	8. Cooperative arrangements have been made with other school systems or non-profit private schools.	X							
	9. Advisory committees are properly constituted and active.					X			One major program advisory committee is properly constituted, and acts as the advisory committee for the Exemplary Program also.

Comments by administrators, teachers and/or students:

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
B. Facilities	10. Adequate classroom space is available for all phases of the program.					X			Schools are crowded due to court order closing some schools to meet integration requirements.
	11. Basic laboratories and equipment are provided for the exploration and orientation functions.	X							Funds for the original proposal were reduced and most all exploratory phases were eliminated. Almost no basic laboratory equipment exist.*
	12. Specific skills laboratories and equipment are available and current with business and industry practices.				X				Almost no laboratories and equipment existing in the participating schools except in the Vocational-Technical Center. Their equipment is outstanding.
	13. Safety is prominent in the design and operation of the classrooms and laboratories.					X			Most participating schools are fairly new and safety features were incorporated in the design.
	14. Arrangements have been made in the community for the use of specialized equipment and facilities not available at school.				X				No evidence exists.

Comments by administrators, teachers and/or students:

*One of the original schools scheduled for involvement in the exemplary program contains a complete Industrial Arts facility. This school was closed due to court action concerning integration. No space exists at any of the other participating schools for the Industrial Arts equipment.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
C. Curriculum	15. Activities and experiences are being conducted to enhance self-understanding in relation to the world of work at the junior high level.						X		Staff members were not hired until January or later and much time the past academic year was spent in planning, coordinating and preparing materials for this academic year. Due to the characteristics of the student population most activities have centered around attitude development.
	16. Provisions have been made for exploratory and preparatory instruction at the senior high level.								Most all exploratory and preparatory activities except where related to the regular academic program had to be dropped due to a reduction in funds.
	17. Provisions are made for work experience, cooperative education and similar programs for all students during the school year and/or in the summer, making possible a wide variety of occupational offerings.						X		The Teacher-Counselors are working with numerous other community action agencies many disadvantaged youth particular in work experience programs for the summer.
	18. Provisions are made for potential dropouts, general and academic students, not previously enrolled in vocational programs to receive specific intensive training in job entry skills just prior to leaving school.	X							This phase of the project was dropped due to reduction in funds from original proposal. However, plans are developing to initiate the intensified training in the near future.

Comments by administrators, teachers and/or students:

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
C. Curriculum (Cont'd.)	19. Provisions are made for intensive occupational guidance and counseling for students before they terminate, generally increased just before student's termination and for initial job placement.						X		Provisions are made and plans are being developed for this program phase.
	20. Provisions are made for releasing young workers from jobs on part-time basis to increase educational attainment.	X							
	21. New approaches and tested innovations which have emerged from recent research and demonstrations are utilized.						X		Most new approaches and innovations identified in the proposal are being utilized in the planning and implementation stages. The Teacher-Counselors are constantly searching for successful approaches and innovations to incorporate in the program also.
	22. Provisions are made to motivate and provide pre-professional preparation for potential vocational teachers.	X							

Comments by administrators, teachers and/or students:

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
C. Curriculum (Cont'd.)	23. Provisions are available for student movement between academic and vocational instruction.						X		Provisions already existed for this program phase.
	24. Provisions have been made for broad occupational orientation for all students at the elementary and secondary levels to increase student awareness of range of career options.						X		Outstanding plans have been made and action taken at the elementary level. Teacher-Counselors appear to have begun to make an impact by working with other elementary teachers in the adoption of materials and methods for this program phase.*
	25. Compensatory education for vocational students is an integral part of the program.								

Comments by administrators, teachers and/or students:

*A. Many materials have been developed at the elementary level and Teacher-Counselor has done considerable demonstration teaching for the elementary teachers. Teacher-Counselor has also demonstrated the use of the teaching materials to elementary faculty groups. Materials have been developed for several reading levels and color coded by grade levels so students do not lose status by being identified by a grade level number system. Only teachers will know the grade level of the color code. Resource persons are being utilized and list of resource persons is being distributed to all teachers.

B. Many activities are being utilized at the junior high level for orientation purposes. One school is using all English classes to provide much occupational information. The school paper is using career development as its theme.

C. No persons have been hired as yet for the secondary phase of the project.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
C. Curriculum (Cont'd.)	26. The curriculum is accepted by the student body.							X	The Teacher-Counselors are becoming accepted. This is an outstanding point in the project especially with the student population utilized for this project.
	27. The program is designed to develop in students vocational maturity and positive attitudes toward work.						X		Project director and Teacher-Counselors are constantly planning and working toward this end. All methods and activities are planned to assist students in developing positive attitudes toward work and becoming vocationally mature.*
	28. Staff members are providing occupational information in their area of specialization.					X			At the secondary level regular vocational personnel are providing occupational information in their area of specialization. At the elementary and junior high levels, the Teacher-Counselors are beginning to coordinate and provide assistance to teachers in planning and carrying out an occupational information program.
	29. The program is designed to broaden and improve the vocational education curriculums.								When program results are in all materials will be published in hopes of improving other vocational curriculums.

Comments by administrators, teachers and/or students:

*The junior high teacher counselors are spending most of their time and are developing most activities to promote positive attitudes at present. It is felt that this must be done because of the characteristics of the student population. The Evaluation Team fully agrees with this approach at this time.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
D. Instruction	30. Teachers are employed and assigned to instructional duties within their area of competency.							X	Teacher-Counselors have varied backgrounds and work in areas closely related to their backgrounds. Teachers seem to be working to gain competencies in other areas particularly in the area of providing occupational information.
	31. Teacher loads are adjusted to levels which allow for preparation, student personnel services, and curriculum development.							X	Personnel employed in the proposal devote full time to preparation, student personnel services and curriculum development.
	32. Outside consultants and specialists other than professional educators are being utilized.		X						No evidence exists of any involvement of outside consultants other than professional educators.
	33. Exchange of personnel between schools, industry and school, school and other agencies, institutions or organizations is practiced.	X							
	34. Program is developing positive faculty and student attitudes toward vocational education.								Too early in program to make a judgment.

Comments by administrators, teachers and/or students:

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
D. Instruction (Cont'd.)	35. Program is being served by a central library in which a career in them is prevalent.	X							
	36. Specialized department references are available for all majors.					X			Teacher-Counselors are beginning to assemble many reference materials that will be available to all teachers.
	37. An organized and systematic program of instructional evaluation is present and students are performing at a predetermined level.					X			Discussion has been given to and some unit guides are being developed around the use of behavioral objectives.*

Comments by administrators, teachers and/or students:

*Standardized exams will be given for program evaluation purposes whe ever possible.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
E. Student Personnel Services	38. Provisions are made for obtaining information about students.					X			The school system has an adequate testing program for providing most information about students, additional test batteries (aptitude, interest, and personality) will be given. No provisions exist for visiting each students homes to obtain additional critical information.*
	39. Provisions are made for the maintenance and use of the information about students.								Teacher-Counselors plan to discuss with teachers how the information gathered may be of use to them in helping students in their programs. Teacher-Counselors also plan to discuss with students information that will aid them in appraising their current aptitude, interest, personalities and skills in relation to their occupational preference.

Comments by administrators, teachers and/or students:

*The aptitude, interest, and personality test will be used as a point of departure in helping the student to analyze himself in relation to the world of work.

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
E. Student Personnel Services (Cont'd.)	40. Well developed, active guidance program for non-college bound youth is functioning.						X		The Teacher-Counselors at this point in time have spent most of their time working with teachers and other community action groups in order to get them to initiate many guidance activities in their programs. The Teacher-Counselors at the secondary school level will administer a testing program and explain the results to each student so he may be able to appraise himself in light of his expected career choice.
	41. Students are selecting vocational courses that relate to their interest, aptitude and personality.					X			Plans have been initiated to assess to what extent students are selecting vocational courses that relate to their aptitudes, interests & personalities*
	42. Placement of graduates is considered a school responsibility and is functionally coordinated by one person.								Project Director presently is coordinating this function. Teacher-Counselors have spent considerable time in the placement of students in summer employment. Teacher-Counselors are placing a limited number of students at present.

Comments by administrators, teachers and/or students:

*In the evaluation section of the proposal "Objective 2" attempts to assess this appraisal factor when it notes that students will make realistic occupational preferences as indicated by a comparison of counselor assessment prior to enrolling in the program, instructor assessment during the program findings during placement counseling and student follow-up activities, and measurement by the "Minnesota Satisfaction Questionnaire".

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
E. Student Personnel Services (Cont'd.)	43. The vocational faculty and staff are committed to placement and follow-up of every school terminee.						X		Each Teacher-Counselor expresses a concern to place every school program dropout or graduate. Their effort to place many students in summer employment offers evidence of this commitment.
F. Public Relations	44. The program is being actively publicized and promoted locally and statewide.				X				One newspaper article has been written about the program. One discussion on a local T.V. station dealt with the program. Many talks have been given by the Project Director and Teacher-Counselor to civic groups.

Comments by administrators, teachers and/or students:

Function	Appraisal Factor	Scale							Findings and Stipulations
		Does not apply	Nonexistent	Ineffective	Needs improvement	Acceptable	Commendable	Outstanding	
		X	0	1	2	3	4	5	
F. Public Relations (Cont'd.)	45. The program is being actively publicized and promoted locally and statewide.								
G. Evaluation	46. Plans are in existence for planning, modification, and development on a continuous basis.					X			Meetings are held periodically for planning, coordinating, modifying, and developing the program. Much time has been spent in the development of the program thus far.
	47. Plans are in existence for evaluating and monitoring the program.								The ORDU* staff has visited the program periodically for evaluating and monitoring purposes.

Comments by administrators, teachers and/or students:

*Occupational Research and Development Unit at Auburn University.

APPENDIX C

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STRONG, MERLE E.

AN ASSESSMENT OF WISCONSIN'S ALLIED HEALTH OCCUPATIONS EDUCATIONAL PROGRAM.

WISCONSIN UNIV., MADISON. COOPERATIVE EDUCATIONAL RESEARCH AND SERVICES
MF AVAILABLE IN VT-ERIC SET.
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DESCRIPTORS - *HEALTH OCCUPATIONS EDUCATION; *MANPOWER NEEDS; EMPLOYMENT OPPORTUNITIES; *ADULT VOCATIONAL EDUCATION; *PROGRAM EVALUATION
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ABSTRACT - CONCERNED WITH THE QUALITY AND QUANTITY OF ALLIED HEALTH OCCUPATIONS TRAINING IN WISCONSIN, THE DEPARTMENT OF EDUCATIONAL ADMINISTRATION AT THE UNIVERSITY OF WISCONSIN INITIATED THIS INVESTIGATIVE STUDY INTO EXISTING EDUCATIONAL OPPORTUNITIES FOR STUDENTS AND MANPOWER NEEDS, REGULATIONS, LICENSING AND ACCREDITATION STANDARDS FOR INSTITUTIONS WITHIN THE STATE. STATISTICS FROM THE STATE EMPLOYMENT SERVICE, REVIEWS OF CURRENT SURVEYS, AND PREVIOUS MANPOWER STUDIES PROVIDED MUCH OF THE BASIC DATA. BY QUESTIONNAIRES TO THE STATE'S 18 VOCATIONAL TECHNICAL AND ADULT EDUCATION DISTRICTS, THE PERCENT OF APPLICANTS ACCEPTED AND THE ENROLLMENTS IN VARIOUS AREAS OF HEALTH EDUCATION PROGRAMS WERE OBTAINED. A TEAM OF SPECIALISTS FROM SEVERAL STATES WAS RESPONSIBLE FOR REVIEWING THE DATA AND MAKING RECOMMENDATIONS FOR IMPROVEMENT OF PROGRAMS. THOSE RECOMMENDATIONS, TABLES, MAPS AND APPENDIXES ARE INCLUDED. (SN)

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AN ASSESSMENT OF WISCONSIN'S

ALLIED HEALTH OCCUPATIONS

EDUCATIONAL PROGRAM

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Conducted for the Wisconsin
Advisory Council on Vocational Education by the
Cooperative Educational Research and Services
Department of Educational Administration
University of Wisconsin

1971

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PREFACE

Parallel with the public's interest in the availability of health services is the requirement for well educated health manpower in adequate numbers to meet employer demands. In addition to this concern is the goal of the Wisconsin State Board of Vocational, Technical and Adult Education to make educational opportunities available to all youth and adults that will qualify them for productive and satisfying employment. The field of health care is among our fastest expanding industries with projected demands which should provide satisfactory careers for many additional persons who can qualify.

Wisconsin can be proud of its educational system for supplying health workers as well as the relatively high quality of health care being provided. The demand for health service both in terms of quality and quantity are expanding, however, which calls for a recommitment of all agencies and groups to meet these new demands.

The State Advisory Council on Vocational and Technical Education recognize that many other governmental, professional and lay groups have a prime concern in the area and therefore address the question of how to meet health education needs in a spirit of cooperation and support rather than one of competition. The fine work of all agencies involved is recognized and commended; therefore, it is the committee's desire to make recommendations helpful to the State Board of Vocational, Technical and Adult Education which will be supportive of the total State effort to provide well qualified health workers in adequate numbers in all geographical locations to meet needs.

In conducting this assessment of allied health occupations training in Wisconsin, currently available information related to the manpower needs, educational opportunities, and the regulations governing training and/or practice in the health fields have been utilized whenever possible. The research of primary data was limited by the resources of the study; therefore, the attempt has been made to bring together existing data in a systematic manner. Personal interviews were conducted with the staff personnel at the various state agencies concerned with the health occupations. These interviews have supplied much of the information contained in this report. Current surveys and studies relating to the programs and/or health occupation manpower needs were obtained from both public and private institutions including the various departments of state government.

Information and opinions of the district Vocational, Technical and Adult Education personnel were obtained through a survey of the eighteen VTAE districts. Finally, a two-day meeting on allied health occupations training programs was held in Madison on May 13 and 14 with a number of specialists from the health occupation education field, both from Wisconsin and from several other states, to review the data related to Wisconsin's current allied health occupation programs and needs with the purpose of making recommendations as to how Wisconsin might meet health occupations educational needs more adequately.

The report has been organized around the central issues related to educational planning for the allied health occupations. Chapters are devoted to the following areas: (1) health manpower needs, (2) current health training programs, (3) health occupations survey of the eighteen VTAE districts, (4) regulations and licensing, and (5) recommendations.

Merle E. Strong

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Merle E. Strong

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CHAPTER I

HEALTH OCCUPATIONS MANPOWER NEEDS

The Report of the Governor's Task Force on Medical Education, initiated by Governor Warren P. Knowles in 1967, comments on the rapidly increasing consumer demand for health services. These comments seem viable in the year 1971.

Wisconsin's Medical Manpower Needs

> Wisconsin, like the rest of the nation and the world, has witnessed rapid advances in medicine as new knowledge, increasing skill, new techniques, materials and medicine have led to practical ways of influencing health problems which were unknown only a few years ago. In the past several decades, the demand for health care services of all kinds has increased at a rate well in excess of both the gain in gross national product and the gain in population. The nation's total expenditures for health and medical care increased more than three-fold between 1950 and 1965, from $12.9 billion to $40.8 billion. While per capita expenditures increased somewhat less than three-fold, private health expenditures rose from 3.26% to 4.12% of gross national product--an increase of 26%. In addition, hospital admission rates increased from 96.6 per 1,000 population in 1946 to 138.9 in 1966. In the same period, hospital patient days rose from 879 per 1,000 population to 1,097 per 1,000 population. Every other indicator of demand for health services has increased at the same or greater rates: visit to physicians, out-patient visits, emergency department visits, nursing home patient days, home nursing visits, and many others. There is every indication that the end of this rising trend in the rate of demand for health services is not in sight.
>
> At the same time, it has become increasingly clear that if medical service continues to advance, and it will, and the demands and needs for health care continue to grow, and they will, Wisconsin's ability to provide quality care to all those who seek it will be severely strained. Even if there were no difficulties to be foreseen in the effective utilization of our current resources, finding ways to produce and deliver an expanded level of health care services demands immediate and farsighted attention.[1]

---

[1]The Report of the Governor's Task Force on Medical Education, Madison, Wisconsin, December, 1967, p. 1.

The health care crisis in Wisconsin, forecast by this report, was brought into the public spotlight again on May 18, 1971, when Governor Patrick J. Lucey in a special message to the Legislature on "Health and Health Care in Wisconsin" described the status of the state's health care delivery system:

> Today in health we have reached a state of crisis. Too many of our citizens do not enjoy equal access to health care....
>
> It is indeed paradoxical that at the very time when we are experiencing dramatic breakthroughs in bio-medical science and research, we are still unable or unwilling to provide adequate health care for all of our citizens.
>
> I can think of no field where there is more being done, by more people, than in health, and of no field where there is greater fragmentation of effort. This lack of clear responsibility and planning has produced disparities in the quality of care available to our various citizens, a manpower shortage in health and health related professions, inefficient use of facilities and services, staggering cost increases and ignorance on the part of health consumers.
>
> In fact, as we review the many health related activities initiated by both the public and private sector during the last several years, it would almost appear that individuals and groups have worked in isolation from one another and often at cross purposes.
>
> It would seem that planning has been done only on behalf of an individual practice, a group, a hospital, a medical school or a state agency. And under this type of strategy it has been inevitable that many in need of health care, indeed often those most in need--the poor, the minorities, the isolated rural--have not been included in the solutions proposed by the plans.

As part of this message, Governor Lucey announced the appointment of two major groups to deal with health problems in Wisconsin: the Health Planning and Policy Task Force and the Health Policy and Program Council. During the next 18 months, these groups will be charged to develop a comprehensive health plan and policy for the state. This will include health priorities, legislative recommendations and possible administrative reorganization. This group will also seek to identify responsibilities of the government, the providers, the educational system and the consumers.

In the Wisconsin Manpower Projections published in April, 1970, by the Wisconsin State Employment Service, health was cited as Wisconsin's greatest growth industry from 1970-75. The report noted that 40,300 new jobs will open in medical and other health services, an increase of 62.2 percent over the 97,300 persons employed in health fields in 1970.

These Wisconsin projections closely parallel the national increase forecast for health workers by 1980 released in March, 1971, by the U.S. Department of Labor. According to the report in the Occupational Outlook Quarterly, the needs for health workers is expected to increase 62.9 percent, from 3.9 million in 1968 to 6.35 million in 1980. In addition to this number, the report states, Many new workers will be needed each year to replace those who retire, die or leave the field for other reasons."

A number of factors have influenced rising need, both in Wisconsin and on the national level. These include population growth, increased coverage under health insurance plans, and the rising scope of medical services. These same factors will be the driving force behind the continued expansion in employment of health service workers during the 1970's.

Technological developments also contribute to the rise in demand for health workers, according to the U.S. Department of Labor. "The broader scope of medical services now available through advances in medical science and technology, combined with the public's awareness and demand for such services, will continue to expand needs for new and existing types of health workers. Currently, there are more than 125 health occupations that have some 250 secondary or specialty designations," explains the Occupational Quarterly.

This rising need for specialty workers in the health occupations is also reflected in the Wisconsin projections. Although workers included in

the category designated as "medical and dental technicians" is not precisely defined by the State Employment Service report, the need for such personnel is expected to increase 110% in Wisconsin by 1975. Other forecasts relate to the more traditional types of health workers with needs for general duty nurses increasing 60%, licensed practical nurses 60%, physicians and surgeons 48%, psychologists 47%, dentists 35%, medical technologists 23%, and dietitians and nutritionists 22%.

Although State Employment Service projections cover only the period through 1975, national statistics indicate that the pattern of growth in the health occupations will continue through the decade of the 1970's. It also is clear that the task of pinpointing this health manpower shortage, in terms of specific health occupations and/or of sharply defined local geographic areas, i.e. like the WVTAE districts, is a difficult task.

During the compilation of the information contained in this report, several interesting facts concerning the current status of health manpower information emerged. Before considering a number of the existing health manpower studies, some general characteristics concerning the level of the art of health manpower demand estimating should be noted:

1. There is a critical need in Wisconsin to establish a permanent system for the collection and dissimilation of health manpower information, particularly supply versus demand. Wisconsin needs a computerized, on-going data gathering system capable of supplying up-to-date manpower information, both for specific local areas and on a statewide basis, and one which covers the entire spectrum of health occupations.

   The existing health manpower data is extremely limited as to the scope of the health occupations to which it pertains. Data

generally reports only statewide statistics, usually two to three years old by the time its research is finally distributed to the decision makers within the health industry. Such limitations in a field rapid by changing transformation as a result of medicine discoveries, new paraprofessions emerging, new treatment techniques, and new equipment, seriously impedes health-education planning.

2. There is a need to generate some acceptable criteria for determining health manpower demands. Since the health industry is very prone to base decisions on labor substitutions (such as the necessity for using a pair of nursing assistants instead of one R.N.), it is difficult to find agreement among employers relative to the need for trained workers at a given level. Some health experts tend to view demand in terms of ideal or recommended standards for proper patient care, such as so many nurses per 100,000 population; while still other health officials view demand with a sharp eye toward current economic conditions, or actual budgeted positions. This is particularly true in hospitals where rising costs are a major concern and where the salary differentials between LPN's and nurse assistants can make a significant difference in a hospital administrator's perception of health manpower demands.
3. The over-reliance by health education planners on existing health manpower data would seem to be imprudent and unwise at this time in view of the limitations of that data. This is not to say that planners should ignore existing manpower data, rather it suggests that planners should not accept such data as being unquestionable.

The result of such a decision in a time of a tight labor market would be to greatly curtail or eliminate educational opportunities. Such action

dramatically militates against the concept held by vocational educators that opportunities for education should be available to all.

In planning for future health education training development, Wisconsin educators must concede they may have to plan with less than optimum information and, therefore, should not unduly limit expansion simply based on this one indicator of need.

With these restrictions concerning the health manpower data in mind, the currently available studies related to Wisconsin's health manpower needs are now described.

Review of Existing Manpower Studies

State Comprehensive Health Manpower's Study[2]

Included in this report are portions of the State's Comprehensive Manpower Study as it concerns: medical record librarians, dieticians and food and nutritionists, sanitarians, public health engineers, sanitary engineers, nurses, and L.P.N.'s.

The major findings related to manpower needs in the above mentioned health occupations are shown in Table 1. This study not only treats the qualitative question of gross supply versus gross demand, but also considers the vital ancillary issues of distribution of health workers, and public policy and professional opportunities as related to salaries and promotions. The overall tone of the findings seems to support the need for expanded health-education programs, at least in selected areas and/or occupations. Current supplies of trained health workers do not appear to meet all the demand for educated health personnel.

---

[2]Department of Health and Social Services, Health Division of Comprehensive Health Planning, 1969.

TABLE 1

REPORT OF THE HEALTH PROFESSIONS

Health Profession	Present Number	Needs - 1969	Distribution	Trends of Practice	Needs to 1980 Est. pop. - 4,617,000	Remarks
Nurses	1968: 16,800 Active Total - 20,864 83.8% Active	As community health programs expand, more vacancies for personnel educated at the baccalaureate and higher levels will be required.	In 1968, 28 counties were found to have no Home Care Services for lack of qualified supervisory personnel.	The Commission reported only fleetingly its concern about recruitment, but that element is vital to the attainment of the 1978 goal established. In some way high school and college guidance workers must be alerted to the expanding needs and opportunities for women and men in the field of nursing.	20,700 450/100,000	The numbers of persons prepared as nurse assistants in programs of less than one year will and must increase. Use of greater numbers of nurse assistants and L.P.N.'s will permit better utilization of R.N. personnel in Administrative, Supervisory, and general leadership positions --better utilization of all personnel is a major goal to be sought.
L.P.N.'s	1968: 5,396 - Active 539 - Inactive	1 L.P.N. to 2 R.N.'s			11,000 It should be expected that Wisconsin can achieve this number	

TABLE 1 (continued)

REPORT OF THE HEALTH PROFESSIONS

Health Profession	Present Number	Needs - 1969	Distribution	Trends of Practice	Needs to 1980 Est. Pop. - 4,617,000	Remarks
Medical Record Librarians		Smaller hospitals are having difficulty in recruiting Medical Record Librarians. One reason may be salary.	Too few people know about the Medical Record Librarian field	In hospitals where there are older Medical Record Librarians, they are not too eager to hire a younger individual. Anyone with more education seems to be a threat to them.		Could take care of the needs of many hospitals, insurance companies and clinics by teaching a course in medical terminology and typing skills.

Health Manpower needs in the field of Dietetics and Food and Nutrition.

A rough estimate of the manpower needs in the field of dietitians indicates there has been a favorable response to recruitment programs over the past several years. At present, approximately three-fourths of the general hospitals in the state are being served by full-time, part-time or consultant dietitians. Nursing homes now show about one-third having services of a dietitian or other suitably trained personnel, and approximately three-fifths of the county institutions have acquired qualified dietary persons. This, in no way, includes any attempt to evaluate the adequacy of service provided.

With the major number of qualified dietitians located in the southeastern part of the state, it appears the greatest need is to develop some means of providing adequate dietary supervision for those less populated areas of the state where it has not been possible to secure trained personnel. These areas are noticeably in the northern one-third of the state and a small section of the southwestern corner.

TABLE 1 (continued)

REPORT OF THE HEALTH PROFESSIONS

Health
Profession

Health Manpower
needs in the field
of Dietetics and
Food and Nutrition.
(continued)

The present trend in institutional food service administration shows a strong development in the training of the non-professional food service worker, both at the supervisory and worker levels through vocational school based courses. It is felt this is a good trend which will strengthen the quality of food service and at the same time facilitate the work of consultant, shared and part-time dietitians.

The apparent needs which might be projected over the next ten years would include:

1. Continue support and encouragement to approved courses in the training of food service workers and supervisors.
2. Continue recruitment of the non-employed qualified dietitian to return to active professional work.
3. Continue in-service education programs to provide the returning dietitian and those already on-the-job with practical current knowledge, skills and procedures.
4. Consider programs which might be developed to assist the Home Economics trained person secure the necessary additional college level academic courses and experience to equip her for dietary consultation work in nursing homes.
5. Consider other ways in which the institutions, located in isolated areas, might plan to meet dietary department standards.
6. Development of an awareness on the part of institutional administrators and dietary personnel to the need for qualified dietary supervision above the minimum level established by Medicare and other regulatory programs.
7. As larger and more complex nursing homes are being planned, attention will be needed to a more adequate quality and quantity of dietary supervision by qualified personnel.
8. An active program to recruit individuals into the field of dietetics will be needed to maintain, if not increase, the number of dietitians available in the state.

TABLE 1 (continued)

REPORT OF THE HEALTH PROFESSIONS

Health Profession	Present Number	Needs - 1969	Distribution	Trends of Practice	Needs to 1980 Est. pop. - 4,617,000	Remarks
Sanitarians		As vacancies occur, there is no reserve to draw from. Low pay scales make recruitment difficult.	Concentrated in southwestern part of State and along eastern shore. For remainder of state distribution is spotty.	It is difficult to recruit a fully trained sanitarian. At state level, we will accept an individual with basic education requirements, engage him at a lower level and train him.	175	
Public Health Engineers and Sanitary Engineers		If positions requested in Div. of Health 69-71 budget were allowed, the Public Health Engineering staff would have to be doubled.	No local levels of government currently engage a Public Health Engineer.	There are no Sanitary or Public Health Engineers at local government level except those engaged by the state in its district offices.	30+	If there is a press for Air Pollution Control, etc., it will be difficult to get Public Health or Sanitary Engineers.

Source: State Comprehensive Manpower Study, 1969

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Marshfield, Wisconsin's Report on Manpower Needs[3]

Marshfield is the largest medical community per population in the state. Health facilities include St. Joseph's Hospital (400 beds, 1,064 employees), the Marshfield Clinic (96 physicians, 380 employees), the Marshfield Clinic Foundation (4 research scientists, 20 employees), St. Joseph's Hospital School of Nursing (12 professional staff, 165 student nurses), Marshfield Convalescent Center (120 beds, 75 employees) and Norwood Hospital (180 beds, 80 employees). Conservative estimates of the health manpower demand for 1973 are 2,038 trained health workers as compared to the currently 1,730 employed. The clinic care needs for allied health personnel in the above listed institutions are not now being met by the health education programs currently available in the district or surrounding areas of the state.

Some six months ago, a survey was conducted of the six medical institutions in Marshfield. As a result, it has been determined that an acute shortage of allied health workers will begin developing about 1973. The Marshfield Clinic now has 96 physicians, and existing plans call for an expansion of this group to 150 by 1975 and approximately 200 by 1980. St. Joseph's Hospital currently a 400 bed hospital, will have to plan to accommodate the increased number of patients who no doubt will be attracted to Marshfield as a result of increased concentration of medical talent. The figures below are based on the survey of the six medical institutions and the need projections up to 1973.

	Total Medical Personnel Employed	Total Allied Health Personnel Employed	Projected 3-Year Manpower Demand
Marshfield Clinic	475	150	600
St. Joseph's Hospital	1,064	542	1,200
Marshfield Clinic Foundation	20	15	25
St.Joseph's School of Nursing	16	0	20
Marshfield Convalescent Center	75	66	98
Norwood County Hospital	80	57	95
	1,730	831	2,038

Total 3-Year Projection of Minimum Need - 2,038
Total 3-Year Projection Allied Health Personnel Needed - 1,200

[3]The following information was related to the research team by the Director of District 16, in a letter to Dr. M. Strong on March 18, 1971.

It appears that the most acute shortages will be in the following areas: registered nurses, licensed practical nurses, laboratory assistants, operating room assistants, medical secretaries, physical therapy assistants, and occupational therapy assistants.

St. Joseph's Hospital and the Marshfield Clinic are in the early planning stages for the expansion of the medical complex of Marshfield covering the time period to at least 1980. A very important part of the consideration is the availability of manpower to staff these facilities, with particular emphasis on allied health personnel.

It would seem that the district has an obligation and responsibility to become partners in the development of a comprehensive health occupations program to meet the needs so positively evident. (For additional information, contact Frederick J. Wenzel, Executive Director, Marshfield Clinic Foundation, Marshfield, Wisconsin.)

Survey of Present and Future Health Occupation Employment Needs, District 18

This local study illustrates that a health manpower shortage exists in several allied health occupations. The study is limited to the four county area of District 18. It serves as an additional example of how rural health manpower needs can be obscured in statewide statics. It is noteworthy that this study includes manpower information for other health occupations in addition to the nursing cluster. See Tables 2 and 3.

The Milwaukee Area Technical College Survey[4]

In 1970 personnel of the Milwaukee Area Technical College conducted a survey of the health occupations labor demand for District 9 with a particular interest in estimating the impact of the phasing out of several hospital diploma nursing programs on the supply of nursing manpower. This report has at least three specific areas of interest for the purposes of this assessment:

1. It identifies local health manpower shortages.
2. It illustrates the changing nature of nurses training education, i.e., hospitals rapidly phasing out of nurses training and thereby creating a vacuum in the nurse manpower supply.

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[4]Survey of Health Manpower Needs, Milwaukee Technical College, 1971.

TABLE 2

MEDICAL CLERICAL SURVEY
July, 1970

	PRESENTLY EMPLOYED		PRESENT NEEDS		FUTURE NEEDS 1 Year		ENTIRE NEEDS 2 Years	
	PT	FT	PT	FT	PT	FT	PT	FT
Receptionist	12	12	3	2	5	5	2	5
Secretary	7	12	2	2		3	1	7
Bookkeeper		9		3	1	2		6
Medical Record Assistant	4	5		1			1	3
Accredited Record Technician	2	5		1		1		3
Insurance Clerk	3	5	1	1	1	1	1	1
Ward Clerk	14	16	4	7	7	17	6	18
Administration Clerk	1	1						
Accounts Receivable		1		1		1		3
Lab-Xray Secretary		3						
Combined (Secretary-Clerk)								
Billing Clerk	1							
COLUMN TOTALS	53	59	10	19	14	30	11	47
GRAND TOTAL	112		29		44		58	

SOURCE: Health Occupations Survey, VTAE District 18

TABLE 3

TOTAL PROJECTED NURSING MANPOWER NEEDS
BY COUNTY: ADVOTECH, 1970-72

	Burnett				Pierce				Polk				St. Croix			
	70	71	72	Total	70	71	72	Total	70	71	72	Total	70	71	72	Total
R.N.	2	2	6	10	13	17	23	53	10	19	17	46	15	29	37	81
L.P.N.	1	2	2	5	10	14	25	49	3	9	9	21	12	15	22	49
N.A.	5	12	16	33	23	81	76	180	4	39	71	114	27	70	23	120

R.N. -- Registered Nurse

L.P.N. -- Licensed Practical Nurse

N.A. -- Nursing Assistant

SOURCE: Health Occupations Survey, VTAE District 18

3. It demonstrates that even in the State's largest urban center current health occupations education programs are not meeting the total demand for skilled labor.

The reader should note that Table 4 indicates a yearly manpower need of approximately 63 operating room assistants while Table 16 in Chapter II shows that currently the courses for operating room assistants at Milwaukee Area Technical College graduate about 22 per year.

Table 5 illustrates the increases that will be needed in the Milwaukee Area Technical School nursing program in order to offset the loss of nursing personnel formerly trained in hospital school nursing programs. Subsequent to the Milwaukee survey, two additional hospital nurses training programs have announced they will phase out their operations by September, 1971 (see Table 13, Chapter II). This will result in even greater shortages in nursing personnel than Tables 6 and 7 indicate. These two hospital diploma nursing programs accounted for 42% of the total number of students admitted to hospital school programs in the greater Milwaukee area.

Health Manpower Summary by State District of 155 Acute Short-Term General Hospitals in Wisconsin as of September, 1969[5]

Included are preliminary statistical data of surveys taken of nursing services, technical services, therapeutic services, qualified dieticians, home economists, food service manager, registered record librarian and pharmacist services. See Tables 8-11.

This survey was conducted by the Bureau of State Planning in 1969, and included only general hospitals with no attempt to consider the health manpower needs of nursing homes, public health agencies, clinics or physicians offices.

Map A is included to assist the reader in relating information to specific geographical areas.

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[5]Source: Department of Administration, Bureau of State Planning, August, 1970.

TABLE 4

OPERATING ROOM ASSISTANTS - DISTRICT 9

Hospital	No. Employed FT	PT	No. Needed Each Year
Columbia Hospital	5	5	10
Deaconess Hospital	5	-	
Doctors Hospital	7	1	2-4
Lutheran Hospital	35	3-4	8
Lakeview Hospital	2	-	2
Milwaukee County General	4		2
Mount Sinai Hospital	10 +4 LPN's	-	4
Nicolet Hospital	-	10	Dependent --
Northwest General Hospital	9	4	7 FT +3 PT (Possibly more in future)
St. Anthony's Hospital	4	-	1-2
St. Francis Hospital	4	2	2 (Approx.)
St. Joseph's Hospital	10	4	3-4
St. Mary's Hospital	4	1	5 (one per room)
St. Michael's Hospital	2	-	-
St. Luke's Hospital	0	0	4-6
Trinity Memorial Hospital	10	-	2-3
Veterans Administration Center	8	-	Dependent on Vacancies (Civil Service)
West Allis Memorial	2	-	2
West Wide Hospital (Is interested that program be started)	0	0	2

Source: Survey of Health Manpower Needs, Milwaukee Technical College, 1971.

TABLE 5

AN EIGHT YEAR PROJECT PROPOSAL TO INCREASE ASSOCIATE DEGREE NURSING GRADUATES FOR DISTRICT 9 TO HELP OFFSET THE DECREASE DUE TO CLOSING OF DIPLOMA SCHOOLS OF NURSING, 1965-1979

Number of Hospital Nursing Students -	65-66	66-67	67-68	68-69	69-70	70-71	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79
(first year class) enrolled at MATC.	193	152	156	165	181	193	*120	T70	70	70	#0	0	0	0
Number ADN Nurs. Students (first year class) enrolled at MATC	44	70	93	97	137	187	200	240	240	280	280	320	340	360
Total Freshmen Nurs. enrollment	237	222	249	262	318	380	320	310	310	350	280	320	340	360
Hospital Nurs. Graduates	152	139	121	110	106	**116	127	135	84	49	49	49	0	0
MATC Nursing Graduates	0	26	47	58	62	**96	130	140	168	168	196	196	224	238
Total Nursing Graduates - 4 Hospitals & MATC	152	165	168	168	168	212	257	275	252	217	245	245	224	238
Number of second year ADN Students at MATC						105	150	160	192	192	224	224	256	272
Total ADN Students at MATC						292	350	400	432	472	504	544	596	632
Number of first & second yr. Instructors						8/10	10/14	12/14	12/18	14/18	14/22	16/22	17/22	18/26
Number of additional Instructors needed - nsg.							6	2	4	2	4	2	1	5
Number of Add. (estim.) Science Instructors						1	0	2	1	2	0	2	1	2

T - 3rd Hospital Nursing School Closes -- #4th Hospital Nursing School Closes.

* - Sept. 1971 - Two Hospital Schools of Nursing began phasing out. Will close nursing programs by 1973.

** - Estimate on 70% retention as per past retention figures.

SOURCE: Survey of Health Manpower Needs, Milwaukee Technical College, 1971.

TABLE 6

A 10 YEAR STUDY OF REGISTERED AND PRACTICAL NURSING STUDENT ADMISSIONS

Diploma Schools with MATC	1959-1960	1960-1961	1961-1962	1962-1963	1963-1964	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969	1969-1970	1970-1971	Estimates 1971-1972
Columbia	56	64	63	50	58	67	58	48	50	53	54	62	66
Deaconess	50	47	51	47	49	42	40	25	31	37	51	44	50
*Lutheran	44	44	45	52	54	62	53	39	40	47	44	47	0
*Misericordia	24	30	25	0	0	0	0	0	0	0	0	0	0
*Mt. Sinai	40	48	55	39	34	47	49	37	38	30	34	40	0
Sub-Total	214	233	239	188	195	218	200	149	159	167	183	193	116
Diploma Schools outside MATC													
St. Mary's	61	70	56	46	60	57	76	54	0	0	0	0	0
County General	102	100	100	105	107	84	89	93	112	115	102		
Sub-Total	163	170	156	151	167	141	165	147	112	115	102		
B. S. Degree Schools													
Alverno	40	55	50	47	55	89	86	63	50	60	44		
Marquette	65	68	59	84	106	100	98	104	98	97	113		
UWM	0			0	0			47	142	197	190		
Sub-Total	105	123	109	131	161	189	184	214	290	354	347		
Associate Degree Nursing Program													
MATC	0	0	0	0	0	0	44	70	93	97	137	187	200
Total	482	526	504	470	523	548	593	580	654	451	769		
PRACTICAL NURSING													
MATC	140	133	143	144	137	143	98	145	187	193	202		202
Sacred Heart	35	32	36	21	87	100	106	106	108	109	110		
Total	175	165	179	165	224	243	204	251	295	302	312		
Total Nursing Admissions, both RN's & PN's	657	691	683	635	747	791	797	831	949	753	1081		

*These hospital programs will be terminated by September 1971.

SOURCE: Survey of Health Manpower Needs, Milwaukee Technical College, 1971.

TABLE 7

A 10 YEAR STUDY OF REGISTERED AND PRACTICAL NURSING STUDENT GRADUATES OF MILWAUKEE COUNTY

Diploma Schools wtih MATC	1959-1960	1960-1961	1961-1962	1962-1963	1963-1964	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969	1969-1970
Columbia	30	38	47	41	41	49	38	44	44	42	35
Deaconess	20	53	10	30	64	41	33	28	25	11	17
Lutheran	38	66	27	31	36	36	31	41	29	34	29
Misericordia	18	15	18	0	29	0	0	0	0	0	0
Mt. Sinai	14	37	35	36	39	24	24	26	23	23	25
Sub-total	120	213	137	138	209	150	126	139	121	110	106
Diploma Schools Outside MATC											
St. Mary's	55	49	40	49	37	43	41	38	51	38	0
County General	77	128	72	78	80	78	88	63	72	79	80
Sub-total	132	177	112	127	117	121	129	101	123	117	80
B. S. Degree Schools											
Alverno	17	14	25	30	34	27	29	47	56	?	25
Marquette	39	57	41	43	37	39	43	101	81	70	63
UWM	0	0	0	0	0	0	0	0	0	48	67
Sub-total	56	71	66	73	71	66	72	148	137	118	155
Associate Degree Nursing Program											
MATC	0	0	0	0	0	0	0	26	47	58	62
Total	308	461	315	338	397	337	327	414	428	403	403
					PRACTICAL NURSING						
MATC	115	105	99	96	91	99	96	64	92	128	126
SACRED HEART	33	27	30	34	20	79	96	99	95	103	101
TOTAL	148	132	129	130	111	178	192	163	187	231	227
TOTAL NURSING GRADUATES, BOTH RNS & PNS	456	593	444	468	508	515	519	577	615	634	630

SOURCE: Survey of Health Manpower Needs; Milwaukee Technical College, 1971.

TABLE 8

NURSING SERVICES SUMMARY

District	Registered Professional Nurses					Licensed Practical Nurses				
	FT	PT	Total	FT[1] Need	Need[2] FT	FT	PT	Total	FT[1] Need	Need[2] FT
Southern (1)	1190	808	1998	205	17.2	307	138	445	111	36.2
Southeastern (2)	2019	1747	3766	535	26.5	993	457	1450	388	39.1
Lake Michigan (3)	451	479	930	23	5.1	235	125	360	18	7.7
Lake Winnebago (4)	370	407	777	57	15.4	269	111	380	23	8.6
Western (5)	276	231	507	51	18.5	145	74	219	46	31.7
West Central (6)	345	255	600	48	13.9	98	52	150	31	31.6
North Central (7)	352	345	697	34	9.7	81	35	116	16	19.8
Northwestern (8)	116	105	221	27	23.3	123	68	191	20	16.3
STATE TOTAL	5119	4377	9496	980	19.1	2251	1060	3311	653	29.0

[1]Number of additional full-time personnel needed.
[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

TABLE 8 (continued)

NURSING SERVICES SUMMARY

District	Nursing Assistants FT	PT	Total	FT Need[1]	Need FT[2]	Ward Clerks FT	PT	Total	FT Need[1]	Need FT[2]
Southern (1)	1323	755	2078	156	11.8	145	36	181	26	17.9
Southeastern (2)	2565	1337	3902	326	12.7	622	314	936	98	15.8
Lake Michigan (3)	596	526	1122	0	0	50	20	70	1	2.0
Lake Winnebago (4)	579	450	1029	25	4.3	44	37	81	9	20.5
Western (5)	425	309	734	39	9.2	38	55	93	5	13.2
West Central (6)	639	348	987	14	2.2	85	38	123	8	9.4
North Central (7)	535	305	840	11	2.1	141	72	213	3	2.1
Northwestern (8)	211	199	410	10	4.7	17	15	32	6	35.3
STATE TOTAL	6873	4229	11102	581	8.5	1142	587	1729	156	13.7

[1]Number of additional full-time personnel needed.

[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

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TABLE 9

TECHNICAL SERVICES SURVEY

District	X-Ray Technician					Medical Technologist ASCP					Laboratory Technicians				
	FT	PT	Total	FT[1] Need	Need[2] FT	FT	PT	Total	FT[1] Need	Need[2] FT	FT	PT	Total	FT[1] Need	Need[2] FT
Southern (1)	105	16	121	15	14.3	137	35	172	12	8.8	95	20	115	14	14.7
Southeastern (2)	264	70	334	39	14.8	452	195	647	59	13.1	204	102	306	25	12.3
Lake Michigan (3)	43	7	50	1	2.3	50	13	63	1	2.0	48	12	60	1	2.1
Lake Winnebago (4)	54	6	60	7	13.0	66	17	83	5	7.6	64	15	79	2	3.1
Western (5)	21	10	31	4	19.0	13	9	22	7	53.8	22	6	28	5	22.7
West Central (6)	41	15	56	1	2.4	36	11	47	4	11.1	38	20	58	2	5.3
North Central (7)	43	9	52	1	2.3	45	12	57	3	6.7	40	12	52	1	2.5
Northwestern (8)	20	7	27	1	5.0	8	8	16	5	62.5	21	8	29	2	9.5
STATE TOTAL	591	140	731	69	11.7	807	300	1107	96	11.9	532	195	727	52	9.8

[1]Number of additional full-time personnel needed.

[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

TABLE 10

THERAPEUTIC SERVICES SUMMARY

District	Physical Therapy Assistants FT	PT	Total	FT Need[1]	Need[2] FT	Physical Therapy Aids FT	PT	Total	FT Need[1]	Need[2] FT
Southern (1)	5	0	5	2	40.0	24	6	30	4	16.7
Southeastern (2)	41	5	46	4	9.8	81	24	105	9	11.1
Lake Michigan (3)	2	0	2	2	100.0	18	10	28	0	0
Lake Winnebago (4)	4	2	6	3	75.0	14	3	17	0	0
Western (5)	4	0	4	2	50.0	12	2	14	3	25.0
West Central (6)	2	0	2	2	100.0	16	3	19	2	12.5
North Central (7)	7	1	8	1	14.3	8	5	13	1	12.5
Northwestern (8)	0	1	1	0	0	6	0	6	0	0
STATE TOTAL	65	9	74	16	24.6	179	53	232	19	10.6

[1]Number of additional full-time personnel needed.
[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

TABLE 10 (continued)

THERAPEUTIC SERVICES SUMMARY

District	Certified Occupational Therapy Assistants (COTA)					Occupational Therapy Aids					Certified Speech Pathologist (ASHA)				
	FT	PT	Total	FT[1] Need	Need[2] FT	FT	PT	Total	FT[1] Need	Need[2] FT	FT	PT	Total	FT[1] Need	Need[2] FT
Southern (1)	6	0	6	0	0	2	0	2	1	50.0	5	1	6	1	20.0
Southeastern (2)	5	0	5	0	0	15	8	23	3	20.0	4	2	6	1	25.0
Lake Michigan (3)	4	0	4	3	75.0	6	1	7	1	16.7	0	0	0	0	0
Lake Winnebago (4)	4	0	4	0	0	3	0	3	1	33.3	1	1	2	0	0
Western (5)	3	0	3	4	133.3	3	1	4	3	100.0	0	0	0	0	0
West Central (6)	5	1	6	1	20.0	7	3	10	1	14.3	0	0	0	0	0
North Central (7)	0	0	0	0	0	2	0	2	1	50.0	0	1	1	0	0
Northwestern (8)	2	0	2	0	0	0	3	33	0	0	0	0	0	0	0
STATE TOTAL	29	1	30	8	27.6	38	16	54	11	28.9	10	5	15	2	20.0

[1]Number of additional full-time personnel needed.

[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

TABLE 11

OTHER SERVICES SUMMARY

District	Trained Food Service Manager					Registered Record Librarian				
	FT	PT	Total	FT Need[1]	Need[2] FT	FT	PT	Total	FT Need[1]	Need[2] FT
Southern (1)	20	0	20	3	15.0	18	4	22	6	33.3
Southeastern (2)	21	1	22	2	9.5	34	5	39	8	23.5
Lake Michigan (3)	11	0	11	0	0	7	5	12	2	28.6
Lake Winnebago	10	0	10	3	30.0	9	6	15	6	66.7
Western (5)	10	0	10	3	30.0	3	6	9	2	66.7
West Central (6)	15	1	16	2	13.3	8	4	12	3	37.5
North Central (7)	5	0	5	0	0	9	1	10	1	11.1
Northwestern (8)	9	0	9	0	0	8	5	13	2	25.0
STATE TOTAL	101	2	103	13	12.9	96	36	132	30	31.3

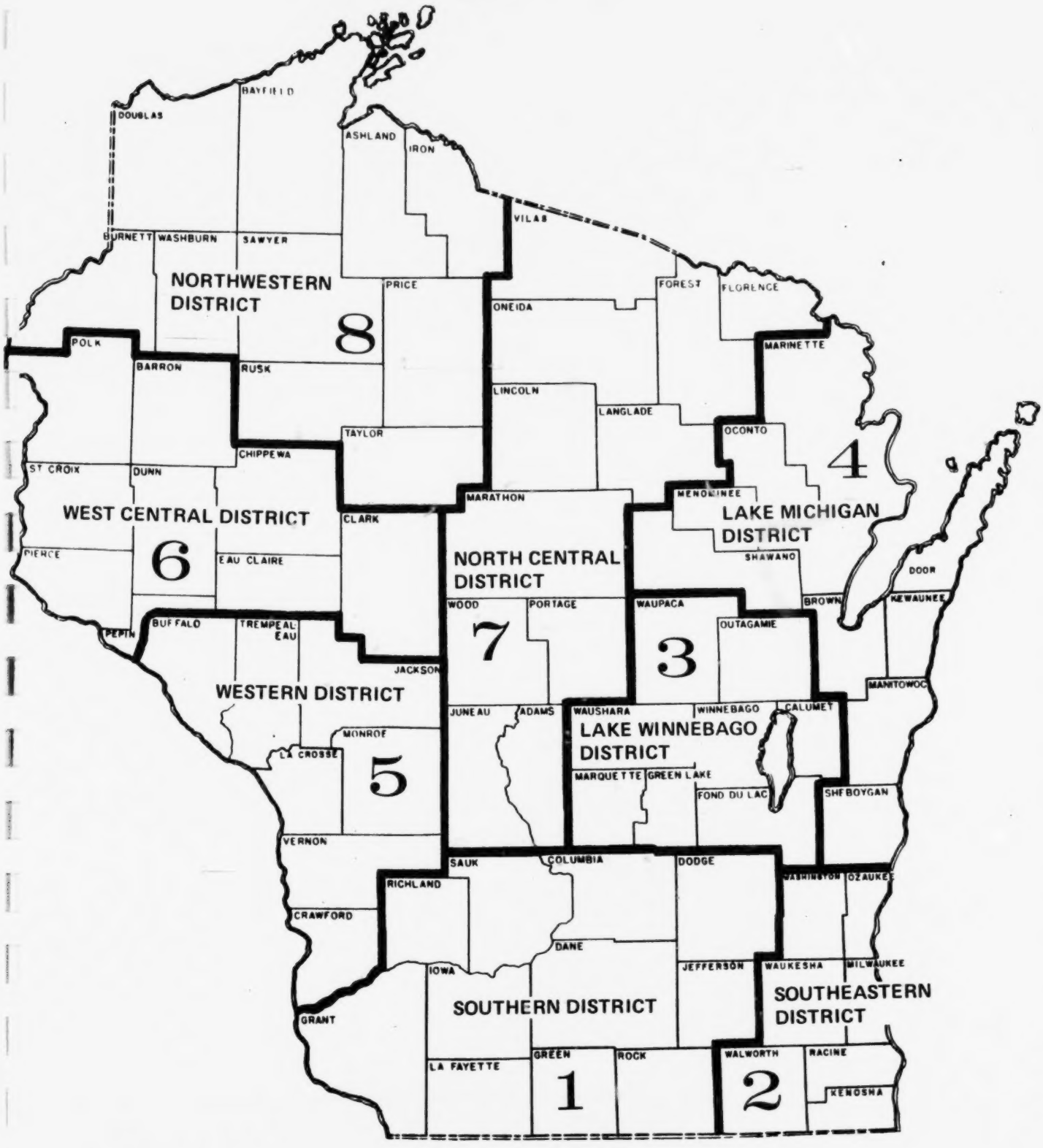
[1]Number of additional full-time personnel needed.

[2]Percent of additional full-time personnel needed.

Source: Department of Administration, Bureau of State Planning, 1970.

WISCONSIN STATE DISTRICTS

MAP A



The data in Table 8 indicates a strong labor demand for nursing personnel throughout the state with the area of greatest need being R.N.'s (need = 980). When the manpower need for RN's is compared to the WVTAE production of RN's (Table 14, Chapter II) it is seen that WVTAE schools graduated only 62 associate degree nurses in 1969-70. This represents only six percent of the needed production of registering nursing personnel. Coupled to this limited WVTAE training capacity is the rapid phase out of hospital school diploma programs. The conclusion one derives from those two facts seem to support a need for expanded associate degree programs throughout the WVTAE system in order to compensate for the phase out of hospital schools and to meet additional demands for nursing personnel.

In looking at the labor demands in other health fields, the x-ray technician stands out as an occupation of need that is not being served by the vocational system. Two programs are projected to start in 1971. This health occupation now employs more than 700 workers in Wisconsin and has an unsatisfied labor demand for 69 technicians.

This statewide health manpower survey indicates that the WVTAE schools are meeting many of the needs in most health fields but in others manpower needs continue to exist.

The Report of the Commission on Statewide Planning for Nursing Education[6]

During 1968-69, at the request of the Governor, a commission on statewide planning for nursing education was charged with conducting an in-depth analysis of Wisconsin's nursing personnel needs for the future (the next five years). The membership of this commission reflected the various public sectors concerned with nursing care, i.e. professional associations, educators health officials, representatives of government health agencies and the general public. The work of the commission is to be commended; the following brief

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[6]Nursing for Wisconsin's Future, Commission on Statewide Planning for Nursing Education, 1970.

summary of its report is offered for the information of the reader of this assessment.

Commission Conclusions, Goals and Recommendations

In formulating its recommendations, the Commission on Statewide Planning for Nursing Education has considered current trends, health needs, changes occurring in the health care system, availability of nursing manpower, types of practitioners needed, and resources. Since accurate projecting of precise needs over a ten-year period are difficult to determine, the Commission recognized that its recommendations should not be rigidified. The Commission also suggested that a continuing agency be established to annually review its recommendations, ascertain progress, and make any revisions warranted by changing circumstances.

Nursing Education Programs

Wisconsin needs general nursing practitioners prepared at all levels (baccalaureate, diploma, associate degree and practical nurse) for staff positions in hospitals, nursing homes and other health agencies and to function as members of nursing teams and/or as team leaders. To assure adequacy of nursing service, a great need also exists to prepare more nurses for teaching, leadership and administrative positions.

In considering the need for nurses in relation to educational preparation and in harmony with established principles of accreditation, the Commission recognized the importance of establishing educational qualifications for specific positions and recommends as aspirational goals over the next decade:

1. Baccalaureate degree for nurses holding positions as: head nurses, team leaders, staff nurses in community health nursing (public health, occupational health, school health), assistant instructors who work with a master teacher, directors of nursing or nursing service in small hospitals under 100 beds, and directors of nursing in nursing homes giving skilled care;

2. Master's degree in nursing for nurses holding positions as: faculty in nursing education programs, master teachers and "clinical specialists," administrators of nursing education programs on the undergraduate level, in-service education directors, supervisors, coordinators of patient care, and consultants, directors and assistant directors of nursing service in hospitals over 100 beds and in community health agencies.

3. Doctorate for nurses in positions as: administrators and faculty of collegiate programs and in research.

The Commission recognized that the employment picture is fluid, and that the effectiveness of educational programs will impinge upon the supply and demand of persons possessing these educational credentials.

Improved practices in nursing undoubtedly will affect educational preparation required by practitioners. These goals, therefore, ought to be examined and modified, if necessary, in light of innovations in the delivery of nursing service.

With respect to nursing education programs in the various categories, the Commission:

Diploma Programs

1. Recognizes that present hospital schools of nursing, which prepare the largest number of R.N. graduates in the state, are needed and should be continued, though no additional diploma programs should be established.

2. Urges that diploma schools not only continue their own self-evaluation, but with others in the community, ascertain their future role in the preparation of nurses. Consultative assistance available from the Board of Nursing and the follow-up agency for the Commission should be utilized in shaping the destiny of diploma schools in the light of evolving trends. The Commission offers to hospitals for consideration these alternatives;

   a. Expansion of presently viable schools;

   b. Cooperative programming or consolidation with other schools where indicated and feasible;

   c. Changing the nature of their participation in nursing education by making clinical facilities available to other education programs.

3. Suggests that diploma schools evaluate their curriculums and consider the modifications of the length of their current program efforts in light of general societal changes, changing concepts of health care, changing roles and responsibilities of the registered nurse and developments in technology and teaching methodology.

Associate Degree Programs

1. Recognizes that the associate degree program lends itself to being the quickest and most practical route toward relieving the supply-demand imbalance in Wisconsin;

2. Looks to the state's vocational-technical institutions, presently being organized along viable district lines, as the prime vehicle for providing the educational experiences relevant to A.D. education;

   a. Recommends that the A.D. program in nursing education at the Milwaukee Technical College increase its enrollment immediately;

   b. Recommends A.D. programs in nursing education be established in qualified technical institutes and other institutions of higher education, those moving toward a state of readiness including Green Bay, Kenosha-Racine area, Madison and Wausau (program initiated in September, 1969, following preliminary report of the Commission);

3. Recommends that in communities where appropriate educational opportunities exist at University of Wisconsin, Wisconsin State University or private institutions of higher education, a cooperative relationship be established between such institutions and the technical institute to enlarge offerings in nursing, to conserve faculty and to reduce cost and duplication of programs through the use of available resources;

4. Recognizes that the development of associate degree programs in nursing education in the emerging vocational-technical system offers a new direction in the preparation of nurses both to the State and to the rapidly forming vocational-technical districts. The Commission, therefore, offers the following guidelines in order to assist in the development of quality programs;

   a. Desirability of "recognized candidate for accreditation" status with the North Central Association of Colleges and Secondary Schools;

   b. Desirability of A.D. programs in other fields;

   c. Preparatory programs in other health occupations;

   d. A qualified registered nurse with a minimum of a master's degree has the authority and responsibility for the development and direction of the associate degree program in nursing education only;

   e. Adequate clinical facilities are available for student experience.

5. Urges that the director of an associate degree program be employed at least one year prior to admission of students to allow for adequate planning of curriculum, recruitment of faculty and for arranging clinical facilities;

6. Suggests that the desirable preparation for principal, or lead, faculty in associate degree programs in nursing be a master's degree in nursing.

7. Alerts vocational-technical leaders at the state and local levels to the necessity to provide adequate supervision for nursing students in the clinical setting.

Practical Nurse Programs

1. Believes that the existing twelve (12) practical nursing education programs need to be augmented only by the addition of a new program at the Eau Claire Technical Institute, with the use of clinical facilities at Chippewa Falls and Menomonie, to provide a sufficient base of supply into 1978 (This would avoid erosion of clinical facilities of the existing baccalaureate program at WSU--Eau Claire);

2. Supports the expansion and strengthening of existing programs at LaCrosse, Neenah, Sheboygan, Stevens Point and Superior, as opposed to development of new programs (other than at Eau Claire);

3. Suggests that schools of practical nursing explore further team teaching techniques, improved utilization of faculty and joint planning with other agencies for the cooperative use of clinical units to assure proper balance among the various levels of nursing education programs in the utilization of available community or regional facilities;

4. Recommends that educational institutions study the feasibility of career mobility for licensed practical nurses through establishment of criteria and an examination for granting credit for knowledge and experience acquired which will be applicable to practical nurses seeking admission to associate degree programs in nursing;

5. Recommends that refresher programs be made available for licensed practical nurses who have been inactive in nursing. It is suggested that terminology for refresher courses and continuing education programs be differentiated.

Nursing Assistant Programs

1. Recommends that vocational schools be encouraged to offer and to expand pre-service education programs for nursing assistants on an area basis and to collaborate and cooperate with hospitals and other agencies relative to the preparation of nursing assistants for health agencies. It is further recommended that health agencies supplement education with introduction to the specific job within the employment setting;

2. Recommends that vocational schools in urban areas expand their programs to accommodate larger enrollments.

While the survey of nursing manpower is the most comprehensive study of its kind conducted, several factors may reflect on its findings:

1. The data used in the report is generally 1969 data, and since then, several significant changes have taken place in Wisconsin's nursing education--most notably the increased rate at which hospital diploma school programs have been phasing out.

2. The figures cited in the commission manpower statistics are statewide figures based on sample survey techniques. These statistics do not reflect specific local health manpower needs as do some of the regional manpower studies previously cited.

3. The commission's recommendation that no more LPN programs be started does not seem to be consistent with the fact the ratio of LPN's in Wisconsin is far below the recommendation of the Surgeon General's Report.
4. The recommendations that qualifications for nursing faculty be raised, requiring the M.S. degree by 1975 seem to be unrealistic in view of the current difficulty schools encounter in hiring qualified staff under present standards.

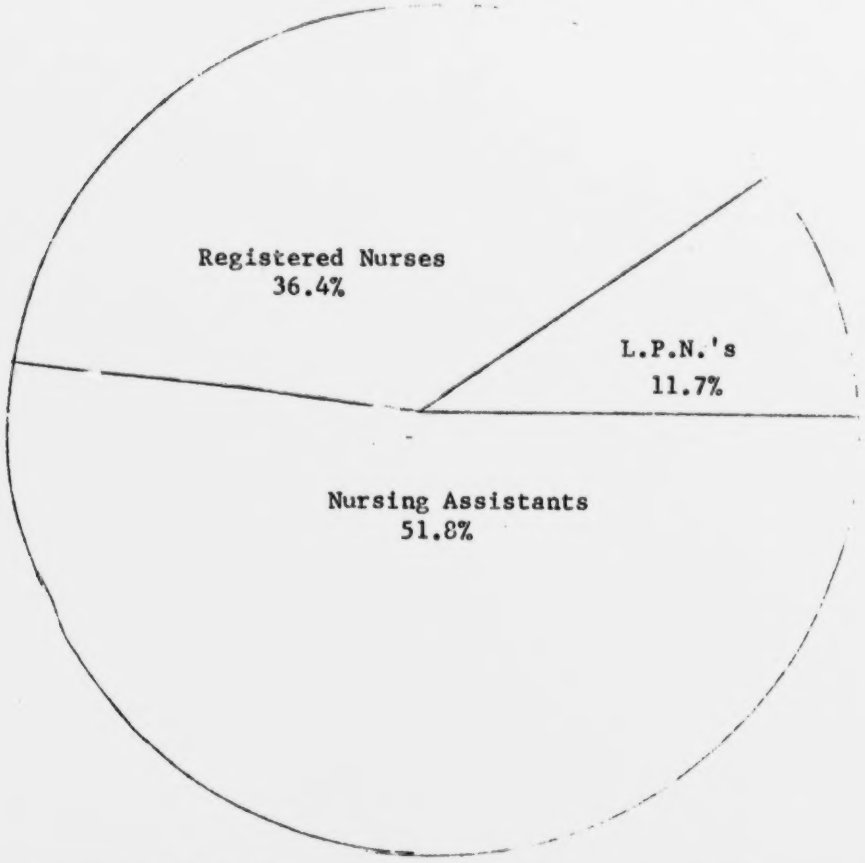
Summary

Analysis of the manpower data compiled for this assessment, as well as discussions held by the Wisconsin Advisory Council for the purpose of ascertaining the health occupation needs in the state, point to the fact that shortages do exist in the state for health manpower services. The real question concerns which areas of the state have the most critical shortages and the magnitude of the shortage.

Wisconsin's health occupation manpower shortages are predicated upon the consideration of the locality being discussed and the economic trends of the country as a whole. An article published in the Milwaukee Journal on May 9, 1971, illustrates this fact. According to this newspaper report, hospital officials in Milwaukee noted that the economic pinch has begun to affect hospitals, easing the demand for beds and the chronic shortage of nurses; but administrators expect that the effect will be temporary. The news release also stated that at Milwaukee County General Hospital the greater availability of nursing has made it possible to change rules on full-time and part-time for more efficient scheduling. However, in the advertisement section of the Journal, numerous advertisements appeared

TABLE 12

PERCENTAGE DISTRIBUTION OF NURSING PERSONNEL
EMPLOYED IN WISCONSIN HOSPITALS
JANUARY 1, 1969



The Surgeon General's Report recommended as a desirable national average that the proportion of nursing personnel for giving direct patient care be 38% registered nurses, 30% licensed practical nurses and 32% nursing assistants. The following table shows the mix of staffing in Wisconsin hospitals in 1968 and 1969 as compared with the recommended reasonable goals of the Surgeon General's report:

Staffing in Wisconsin Hospitals	1966	1969	Recommended Reasonable Goals
Registered Nurses	35.4%	36.4%	38.0%
Licensed Practical Nurses	10.2%	11.7%	30.0%
Nursing Assistants	54.4%	51.8%	32.0%

Source: Report of the Commission on Statewide Planning for Nursing Education, December, 1970.

for all types of health manpower workers. A count of these advertisements for a period of time showed a continuous demand for health manpower needs on the part of hospitals in the Milwaukee area.

This Spring the Wisconsin State Advisory Council on Vocational Education conducted two symposiums regarding health manpower needs in Wisconsin. At one of these sessions reports were received from hospital administrators concerning the shortages of health manpower services in West Bend, Fennimore, New Glarus, Neilsville, Racine, and other more rural areas of the state. At the other symposium representatives from the states health agencies and the major health professions seemed to infer that overall, the current health regulations and training programs were substantially meeting Wisconsin's health manpower needs.

This apparent inconsistency points both to the ambiguity and inadequacy of current health manpower data and also to the present need to re-evaluate how well existing health programs are serving the various areas of the state. The question of equity of access to Wisconsin's health education programs and/or equality of health care available throughout the various geographic regions of the state is paramount in any analysis of future health education planning.

Undoubtedly the many formidable barriers that presently prevent people in some Wisconsin cities and towns from sharing the benefits of first class modern medical services are not easily eradicated. What is needed however is a commitment on the part of health educators and health professionals to creatively attempt to find solutions.

CHAPTER II

EDUCATIONAL OPPORTUNITIES IN ALLIED HEALTH OCCUPATIONS

Generally speaking, four principle types of training opportunities are available to a person interested in pursuing a career in allied health occupations in Wisconsin:

1. On-the-job training programs conducted by hospitals and clinics;
2. Hospital schools' diploma programs in certain health occupations;
3. Health occupations training programs offered by Wisconsin Vocational, Technical and Adult Education Schools;
4. Health occupation programs offered by universities.

Not all of these alternatives are available for any single allied health field, and for many geographic areas opportunities are quite limited since most opportunities are available in the most heavily populated area of the State.

Presently, one or more of the above mentioned types of educational facilities include training programs of less than bachelor degree level in the following health occupations: dental assistant, dental hygienist, dental laboratory assistant, inhalation therapist, medical assistant, medical laboratory assistant, technical nursing (R.N.), practical nursing (LPN), occupational therapy assistant (OT), operating room assistant, optometric assistant, ward clerks, nursing assistant, environmental health aide, physical therapist assistant, hospital food service, radiation technician and medical records (See Appendix A).

The following tables illustrate the various kinds of allied health occupation training programs available today in Wisconsin and where such programs are offered. Due to the rapid expansion in the number of emerging new health occupations, even this rather extensive listing does not represent the entire field of related health occupations. Thus, while Wisconsin can justly pride itself on past growth in the field of health education, the ever-increasing challenge of change is very great.

Health occupations educational opportunities will need to expand greatly if the requirements for qualified people are to be met, as well as educational opportunities for youth.

Several hospital diploma programs have been terminated during the last few years, and at least three of the diploma programs listed in Table 13 will be terminated by the end of 1973. High program costs and the difficulty in securing qualified teaching personnel (who can be spared from other duties directly related to the hospital's primary mission--dispensing health care) have generally been cited by hospital administrators as reason for phasing out nurses training programs in hospitals.

In order that a picture of the potential of the Wisconsin Vocational, Technical and Adult Education systems for serving the State geographically can be visualized, Map C provides the location of full-time schools. Although each of these has a potential for offering health occupations programs, from the standpoint of both administration and cost, it is often more practical to group or concentrate programs in fewer number of schools.

Map D provides information on programs approved for operation in VTAE schools as of July 1, 1970.

MAP B

LOCATION AND TYPES OF NURSING PROGRAMS IN WISCONSIN

TABLE 13

WISCONSIN STATE DIRECTORY OF ACCREDITED SCHOOLS OF NURSING

Program	Where Offered
Program in Practical Nursing - 12 months training leading to a Certificate	Vocational, Technical & Adult Education District 10 Northeast Wisconsin Technical Institute Kenosha Technical Institute Western Wisconsin Technical Institute Madison Area Technical College Milwaukee Area Technical College Sacred Heart School of Practical Nursing Vocational, Technical & Adult Education District 12 Lakeshore Technical Institute Vocational, Technical & Adult Education District 14 Vocational, Technical & Adult Education District 17 Waukesha County Technical Institute
Schools of Professional Nursing - Leading to an Associate Degree	Milwaukee Area Technical College ** North Central Technical Institute**
Programs leading to a Diploma	Bellin Memorial Hospital, Green Bay Mercy Hospital, Janesville* Madison General Hospital Methodist Hospital, Madison St. Mary's Hospital, Madison Holy Family Hospital, Manitowoc St. Joesph's Hospital, Marshfield Columbia Hospital, Milwaukee Deaconess Hospital, Milwaukee * Lutheran Hospital of Milwaukee* Milwaukee County General Hospital Mount Sinai Hospital, Milwaukee* Mercy Hospital, Oshkosh St. Luke's Hospital, Racine
Collegiate Programs leading to a Baccalaureate Degree	Wisconsin State University-Eau Claire Marian College of Fond du Lac Viterbo College University of Wisconsin University of Wisconsin-Milwaukee Alverno College Marquette University, College of Nursing Wisconsin State University-Oshkosh

* Not admitting students
** Initial Accreditation

Source: Wisconsin State Board of Nursing

MAP C

THE WISCONSIN VOCATIONAL SYSTEM'S SCHOOLS
BY DISTRICTS AS OF JANUARY, 1971

State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

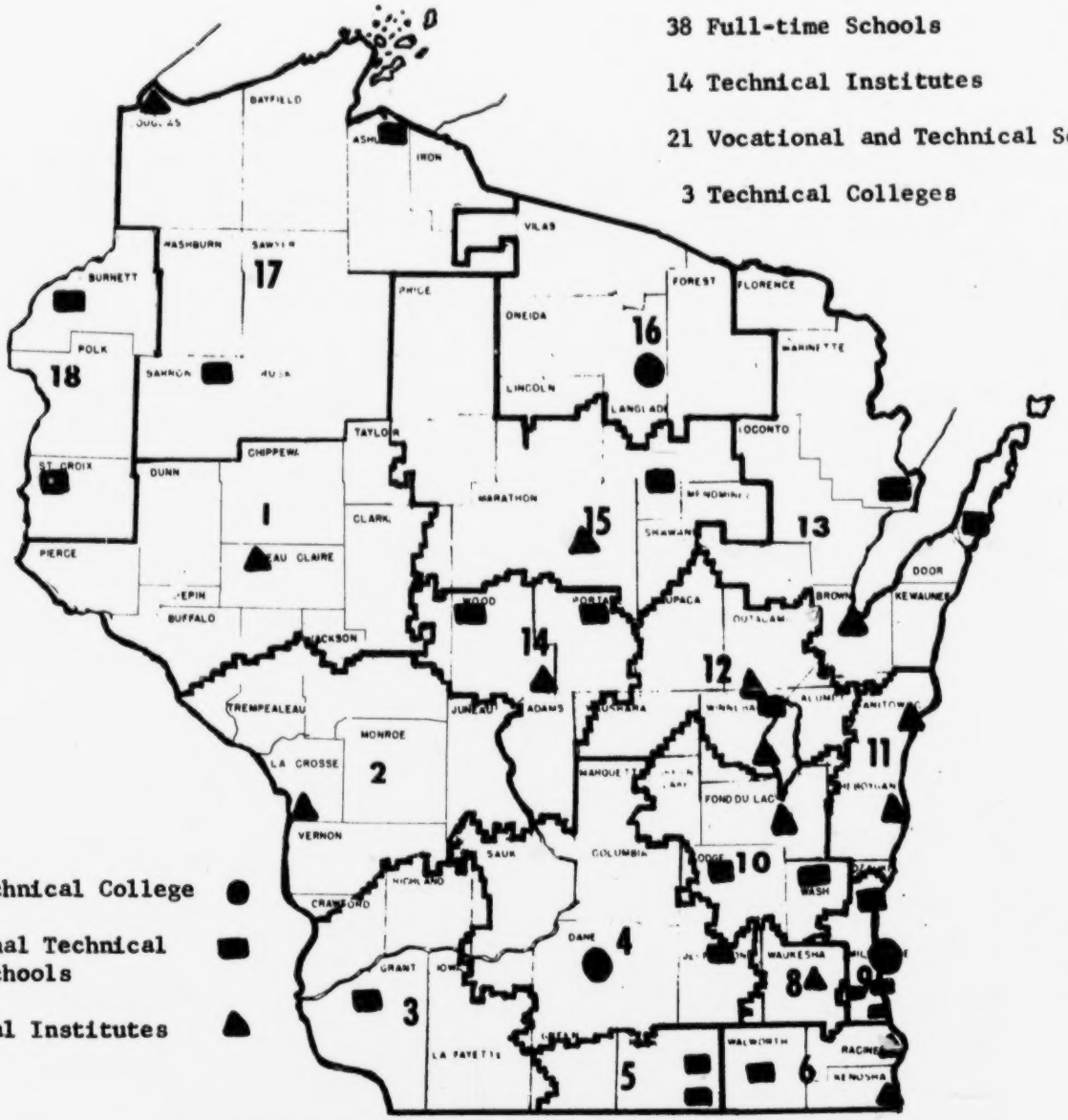
EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703

38 Full-time Schools

14 Technical Institutes

21 Vocational and Technical Schools

3 Technical Colleges



Area Technical College ●

Vocational Technical Schools ▬

Technical Institutes ▲

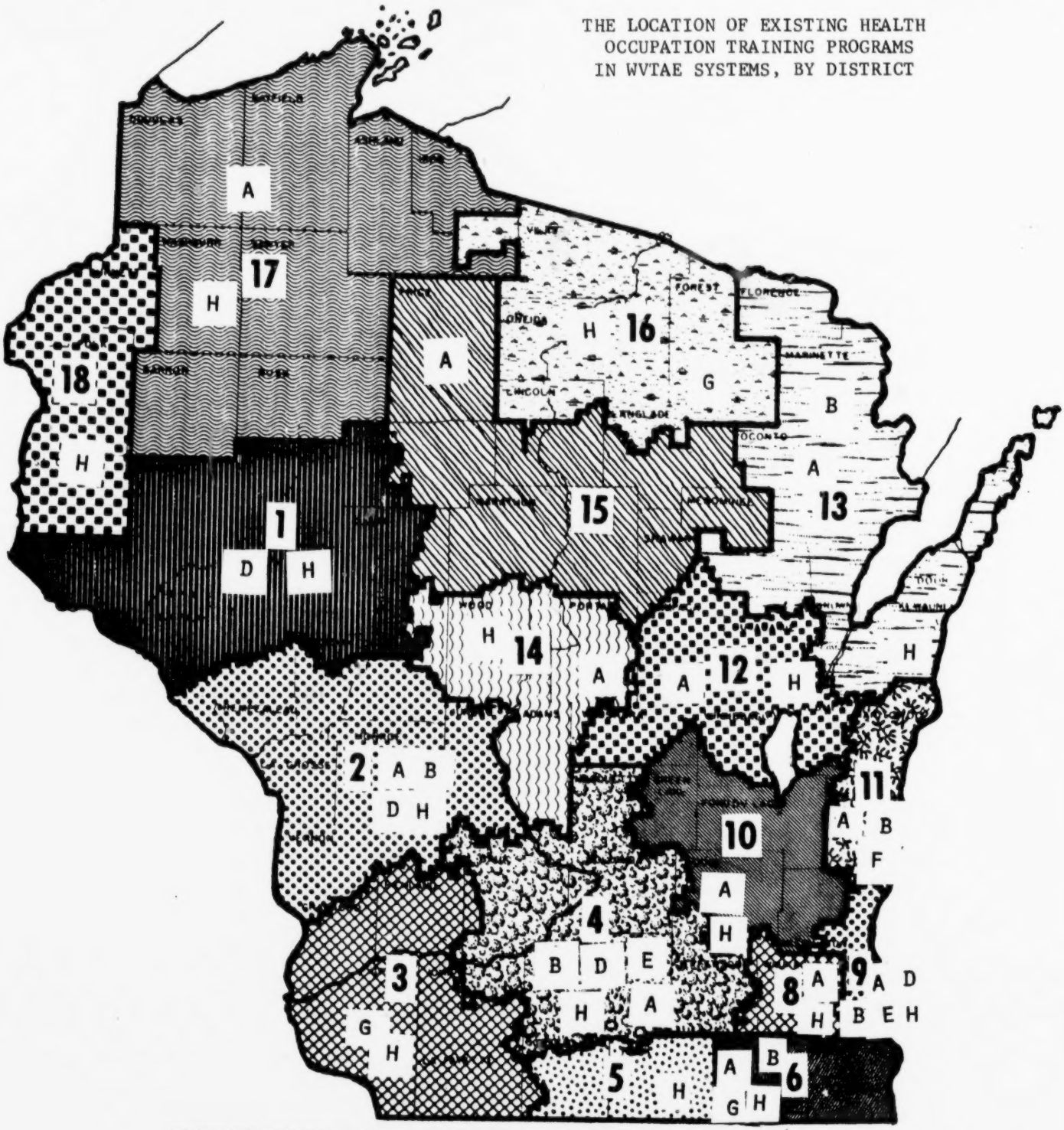
WISCONSIN VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICTS

APPROVED FOR OPERATION JULY 1, 1971

State of Wisconsin \ BOARD OF VOCATIONAL, TECHNICAL & ADULT EDUCATION

EUGENE I. LEHRMANN
State Director
137 EAST WILSON STREET
MADISON, WISCONSIN 53703

THE LOCATION OF EXISTING HEALTH OCCUPATION TRAINING PROGRAMS IN WVTAE SYSTEMS, BY DISTRICT



WISCONSIN VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICTS

APPROVED FOR OPERATION JULY 1, 1971

Legend for Map D

Symbol	(Total Number of Programs)	
A	(13)	Nursing Programs RN's LPN's
B	(6)	Dental Programs Hygienists Lab Technicians Assistants
C	(0)	Radiological Technicians X-ray Technicians Nuclear Medicine Technologists Radiology Therapy Technicians
D	(4)	Laboratory Technicians Cytologists Lab Assistants Lab Technicians
E	(2)	Inhalation Therapists
F	(1)	Optometric Assistants
G	(3)	Administrator of Health Facilities Nursing Home Administration Supervisory Hospital Personnel
H	(15)	Allied Health Nursing Assistants Ward Clerks Medical Secretaries Medical Records Medical Assistants Operating Room Assistants

Tables 14 and 15 provide a complete picture of health preparation programs in VTAE schools. The projected growth in numbers of programs can readily be seen. Also, enrollments in 1969-70 can be compared with actual and projected enrollments for 1970-71. Projections in enrollments are shown through 1973. While there are some omissions in the tables because information or projections were not available, the tables clearly reflect a pattern of growth and a projection of additional growth through 1973.

TABLE 14

PROGRAMS IN THE NURSING EDUCATION - WVTAE SYSTEM

ASSOCIATE DEGREE IN APPLIED SCIENCE IN NURSING (ADN)

WVTAE School	Enrollment Entering (Oct. 1970)		Existing	Enrollment (1969-70) Entering		Existing	Graduates (1969-70)
Milwaukee	181	+	105	137	+	74	62
Wausau	44	+	26			40	
Total			356			451	62

PRACTICAL NURSING (PN)

WVTAE School	Enrollment Entering (Oct. 1970)		Existing	Enrollment (1969-70)	Graduates (1969-70)
Fond du Lac	32	+	25	50	45
Green Bay	32	+	31	60	60
Kenosha	80	+	59	158	123
La Crosse	39	+	26	72	67
Madison	126			106	89
Milwaukee	98	+	80	175	138
Neenah	36	+	39	67	91
Sheboygan	31	+	26	58	29
Stevens Point	41			32	27
Superior	73			65	52
Waukesha	80	(+25 PT)		78	64
Total	979			921	785

OPERATING ROOM ASSISTANT

WVTAE School	Enrollment (Oct. 1970)	Enrollment (1969-70)	Graduates (1969-70)
Green Bay	28	25	22
La Crosse	17	13	11
Madison	28	0	0
Waukesha	32	14	11
Kenosha	16	0	0
Milwaukee	24	0	0
Total	145	52	44

WARD CLERK

WVTAE School	Enrollment (Oct. 1970)	Enrollment (1969-70)	Graduates (1969-70)
La Crosse	17 + (4 PT)	0	0
Waukesha	10	12	11
Total	27	12	11

Pre-Service NURSING ASSISTANTS

Districts 2, 3, 4, 9, 10, 12, 18 others developing programs

Total (Extension and Pre-Service) 1969-70 -- 1822

Source: Staff of Wisconsin Board of Vocational, Technical and Adult Education
November 4, 1970

TABLE 15

PREPARATORY EDUCATIONAL PROGRAMS INFORMATION - WVTAE SYSTEM

Types of Health Occupation Education Programs	Nature of Course	Actual Enroll. 69-70	Grad. 69-70	Number of Programs	Proj. Enroll. 70-71	Actual Enroll. 70-71	Rep. Fall Enroll FT PT	Proj. Enroll. 71-72	Proj. Enroll. 72-73	Number of Programs '73
Nursing										
Nurse - Technical	T	251	62	2	350	356	515+ 57	400	500	3
Practical Nurse	V	932	785	11	1000	979	992+186	1100	1100	12
Nursing Assistant	V(S)	1822		7	2000			2000	2000	
Clerk	V(S)	12	11	2	45	27+		60	85	6
School Health Aide	V(S)	0	0	1	24	10+		36	48	4
Operating Room Assistant	V	56	44	6	120	145	139+ 4	150	175	10
Para-Medical										
Medical Assistant	V	240		8	245		246+ 71	250	275	11
Medical Lab Assistant	V	47		3	50		51+ 0	55	55	2
Medical Lab Technician	T			0	24		14+ 0	68	75	5
Electroencephalograph Tech.	V			0	0		0	24	24	1
Occupational Therapy Asst.	V	26		1	32		28+ 5	45	65	3
Physical Therapy Assistant	T			0	0		0	24	36	1
Inhalation Therapy Asst.	T	20		2	60		71+ 19	64	75	2
Environmental Health Tech.	T			1	12		9+ 1	24	24	1
Medical Electronics Tech.	T			0	16		0	32	32	2
Radiological Technician	T			0	0		0	15	30	2
Medical Record Technician	T			0	0		0	0	16	1
Optometric Assistant	V	19		1	20		17+ 0	24	24	1
Para-Dental										
Dental Hygiene	T	48		1	48		50+ 4	72	96	2
Dental Lab. Technician	T	29		1	38		35+ 4	40	40	1
Dental Assistant	V	188		6	175		210+ 8	200	225	

T = Technical V = Vocational PT = Part-Time FT = Full-Time S = Less Than 1 Year in Length

Source: Staff of WVTAE

A survey of the 18 VTAE districts was conducted in an attempt to determine the number of students served by occupational areas in each district. Districts were also asked to provide the ratio of applicants to those accepted. While no attempt was made to determine the qualifications of the applicants, it can be assumed that in most cases a large percentage of them did meet minimum standards.

In planning programs in vocational and technical education, the philosophy that the program should serve the needs of all people who can profit by the instruction is quite broadly accepted in principle. Also, as a general principle in American education, it has been believed that a student, within some practical limits, should have the opportunity to pursue education for any occupation for which he is qualified. Facts provided by each of the districts quite clearly seem to indicate that in some districts and in several of the occupational areas, opportunities for many seeking health education programs were not available (See Table 16).

TABLE 16

THE HEALTH EDUCATION PROGRAMS OF WVTAE DISTRICTS

WVTAE District	Current Health Programs WVTAE	Enrollment 1970-71	Ratio of Applicants to Acceptance
1	Nursing Assistant Course	240 (9/70-6/71)	5/4
	Certified Laboratory Assistant	24	not given
2	Medical Laboratory Technician	16	2.5/1
	Dental Assistant	36	2/1
	Medical Assistant	36	2/1
	Nurse Assistant	26 per class 4 x per yr.	not given
	Operating Room Assistant	24	1.6/1
	Practical Nursing	40 per class 2 x per yr.	4.5/1
	Ward Clerk	15 per class 2 x per yr.	3/1
	*Electroencephalographic	10 to 16	--
	**Radiologic Technician	16	--
	*Medical Records Technician	12	--
3	Pre-service Nursing	56	1/1
	Ward Clerk	24	1/1
	In-service Nursing	55	extension
	Hospital & Nursing Home (In-service)	470	extension
4	Dental Hygiene	54	8/1
	Inhalation Therapy	40	2/1
	Medical Lab Assistant	24	2/1
	Medical Assistant	45	2/1
	Dental Assistant	45	2/1
	Operating Room Assistant	22	2/1
	Occupational Therapy Assistant	30	4/1
	Practical Nursing	120	4/1
	Nursing Assistant	180	not given
5	Medical Assistant (part-time evening program)	not available	not available

*To start 9/71
**To start 9/72

TABLE 16 (Cont'd)

WVTAE District	Current Health Programs WVTAE	Enrollment 1970-71	Ratio of Applicants to Acceptance
6	Practical Nursing	215	2/1
	Operating Room Assistant	16	1.5/1
	Dental Assistant	22	1.5/1
	Medical Assistant	33	1.5/1
	Nursing Assistant (In-service)	20	1/1
	Nursing Assistant (planned 1971-72)	16	1/1
	Nursing Home Administrator (In-service)	58	1/1
7	None	--	--
8	Practical Nursing	110	3/1
	Medical Assistant	14	1/1
	Operating Room Assistant	24	1/1
	Ward Clerk	15	Quota still open
9	Technical Nursing	292	2/1
	Practical Nursing	190	2.5/1
	Nursing Assistant	38	No record
	Medical Assistant	48	2/1
	Dental Assistant	52	2/1
	Dental Lab Technician	37	2/1
	Inhalation Therapy	47	2/1
	Environmental Health Technology	12	1.5/1
	Operating Room Assistant	22	2/1
	Certified Lab Assistant	15	No record
	Medical Secretary	18	1.1/1
	Community Service Aide	44	1.2/1
10	Practical Nursing	59	3/1
	Operating Room Assistant	15	1.5/1
	Nursing Assistant	112	1/1
	Nursing Extension Course	50	1/1
11	Practical Nursing	82	2/1
	Medical Assistant	28	1/1
	Optometric Assistant	17	1/1
	Dental Assistant	18	1/1

TABLE 16 (Cont'd)

WVTAE District	Current Health Programs WVTAE	Enrollment 1970-71	Ratio of Applicants to Acceptance
12	Practical Nursing	75	3/1
	Nursing Assistant	42	2/1
13	Practical Nurse	60	5/1
	Medical Assistant	36	3/1
	Dental Assistant	36	3/1
	Operating Room Assistant	26	3/1
	Nursing Assistant (Extension)	250/yr.	no record
14	Medical Assistant	24	1/1
	Medical Stenography	24	1/1
	Practical Nursing	40	5/1
	Ward Clerk	given only when need arises	
	Nursing Assistant	given only when need arises	
15	Associate Degree Nursing	80	4/1
16	Nursing Assistant	80	100%
	Supervisory Hospital Personnel (In-service)	50	100%
	Hospital Food Preparation	50	100%
	Nursing Home Administrator (Continuing education)	40	100%
17	Practical Nursing	73	3/1
	Nursing Assistant	30	no record
18	Nursing Assistant	10-12	100%
	Ward Clerk (To begin 9/71)	12-15	100%

Source: Health Occupation Survey of the 18 WVTAE Districts conducted by CERS in March-April, 1971.

There is no way to determine the actual number of on-the-job training programs, but these are usually confined to those health occupations requiring the least amount of formal preparation. The registry and licensing procedures described in Chapter IV dictate that most of the more sophisticated health professions require accredited formal training preparation.

In addition to the four types of educational programs previously discussed, there also exist three other categories of training programs. While still relatively small, they do contribute to the total production of the State's health occupation manpower and include: (1) the recently inaugurated high school programs in health occupations; (2) the U. S. military's medical corps programs for training service personnel in health fields; and (3) the apprenticeship program.

The first high school program in health occupations began in Wisconsin about three years ago. These programs are offered in a very few high schools (See Table 17), although interest in such curricula is increasing.

Most of these programs are vocationally exploratory in nature, rather than directed toward job preparation, per se. There is still an unresolved philosophical dispute among program planners at the secondary school level and health professionals as to the proper mission of Wisconsin high schools in the fields of health occupations. Until some decision to the contrary is made, it appears that most of the high school health occupation programs will not figure significantly in the immediate production of health manpower.

Listed on Table 17 are the schools currently offering programs and those who expect to offer programs in the 1971-72 school year. The table represents the situation as of April, 1971.

TABLE 17

HIGH SCHOOLS OFFERING HEALTH OCCUPATIONS PROGRAMS

High School Health Occupation Programs	High School
Currently Offering a Program	Union Grove High School Frederic High School Whitehall (cluster of schools) Madison Public Schools (Summer, 1971)
Planned to Begin Offering a Health Occupation Program in September, 1971	Shawano High School Waupaca High School Marshfield High School Monona Grove High School Bloomer High School Cluster of 5 Schools - CESA 9 - Door County Plymouth High School - Elkhart Lake - CESA 10

Source: Wisconsin Department of Public Instruction

The U. S. Military Medical Corps provides other auxiliary opportunities to Wisconsin citizens interested in health careers. In recent years, this option has become increasingly important as many returning veterans with military training and experience in health have sought to pursue civilian careers in health occupations. Unfortunately, the transfer of such military training into civilian careers is frequently restricted as a result of licensing and/or registry requirements. Few of the traditional health careers training programs recognize or give advanced credit for a GI's previous military training.

In 1970, the Department of Defense initiated a MEDIHC program (Military Experience Directed into Health Careers) designed to attract former Medical Corpsmen into civilian health occupations. In January, 1971, the Wisconsin Health Council was named the State's operating agency for the MEDIHC program with funding provided by the State Manpower Council.

Although some 200 former Corpsmen have now been referred for employment and/or education through MEDIHC, there is an urgent need for Wisconsin's health officials, both educators and those who license and regulate practitioners, to provide better means for utilizing this manpower potential. Licensure and registry restrictions, coupled with a lack of meaningful proficiency testing, create a waste of experienced and dedicated manpower.

Another new training program for health careers in Wisconsin is the proposal to develop a health occupations apprenticeship program. The "Task Force on Health Occupations," representing members of the professional health occupations associations and the State Apprenticeship Board, have been meeting to discuss such a program. The first report is now available and recommends the establishment of apprenticeship programs in several health fields.

Basically, the program would function similar to apprenticeship programs in more traditional fields. The apprentice would be indentured to a practicing professional at a hospital or clinic, and through a combination of practical experiences and associated classes, would be trained to perform the functions of the profession.

Many questions have been raised concerning the applicability of this training approach to health occupations, but program supporters are enthusiastic. It is likely that some experimentation in this area will be implemented in Wisconsin during the coming years.

Commentary

Wisconsin's current system of health occupation education appears to:

1. Unduly limit the educational opportunities of the State's rural population relative to career preparation in health occupations.
    a. Students from rural areas must now travel long distances and/or relocate to participate in many of the educational programs required as preparation for the major health occupations, e.g., LPN's, dental hygienists, inhalation therapists, occupational therapy assistants.
    b. Students from certain rural areas, where health occupations training opportunities are very limited, are at a disadvantage when competing for entrance into health training programs in the State's publicly supported education facilities.
2. Fail to provide the needed qualified professional health workers throughout the State.

a. Since the training of health workers has been largely confined to the more populated regions of the State, the supply of qualified health personnel in rural areas is severely limited. Although the rural citizens' need for quality health care is as great as that of the State's urban population, the supply of trained health occupation manpower is concentrated within the State's urban areas. By failing to encourage health workers to remain in the rural areas by providing few opportunities for professional growth through continuing education, the State appears to reinforce this flight from rural areas to the cities.

b. Because the development of educational programs for licensed practical nurses has not kept pace with the growth in programs for training nursing assistants or registered nurses, Wisconsin appears to have created a serious gap in available nursing manpower. This lack of middle-level nursing personnel could result in a reduced quality of patient care fostered by over-reliance on the use of nursing assistants; and/or poor utilization of the State's limited supply of registered nurses; and under-utilization of licensed practical nursing help in providing direct patient care (See Chapter I, Table 12).

An examination of Wisconsin's current health occupations educational programs reveals a strong base of experienced health educators and qualified health training facilities, but a need to expand existing health occupation educational opportunities. This expansion must be diverted toward the

development of training programs in new allied health fields, and the implementation of health occupation training programs in new areas of the State not now served by the existing system. The development of health occupation education must be guided not only by the growing need for trained manpower, but also by the State's traditional dedication to serve the educational needs of its citizens. While it is unwise to train people for occupations where there are no opportunities, it would appear to be impossible to improve the quality of health service without an increased supply of trained manpower.

CHAPTER III

HEALTH OCCUPATION SURVEY OF THE 18 WVTAE DISTRICTS

To secure local information and opinions concerning current and future health career educational programming in the Wisconsin Vocational, Technical and Adult Education system, the research staff mailed a questionnaire to all eighteen WVTAE district directors. The purpose of the research was to determine each district's health manpower needs, training programs, enrollment, and future educational plans for programming.

In addition to this data collection, the survey provided the opportunity for district level personnel to express their opinions to identifying the impediments to health program development, the future needs for health training programs, and the types of auxiliary assistance available to help the districts plan new training programs in health occupations.

All eighteen districts were cooperative; the survey enjoyed 100 percent return. The information concerning manpower needs, the current training programs and enrollments were included in previous chapters dealing directly with those topics. In this chapter will be examined the survey's findings of questions concerning training plans, future health program needs, restrictions to program development in health occupations, and the types of assistance available to local districts in developing health occupation education.

A letter and questionnaire were sent to each District Director. A copy can be found in the Appendix. It was indicated that individual responses would be used only bu the Survey Staff so as to solicit candid

answers. Cover letters indicated that usually the Director called upon other staff assistance in responding and even though it was not requested that the persons be listed or that the questionnaire be signed it is assumed that the responses represent the perceptions held by the District Director and his staff.

c The Results of Health Occupations Survey

Following are questions asked from the survey instrument with frequency response listings.

Question: What new programs in the field of health occupations do you feel should be developed by the vocational school (or schools) in your district?

Replies:	Number of Districts
Technical Nursing	8
Ward Clerk & Nurse Assistant	8
Operating Room Assistant	6
Physical Therapist Assistant	5
Practical Nursing	5
Medical Lab Assistant	4
Occupational Therapy Assistant	3
Hospital Administrator	3
Mental Health Aide	3
Radiology Technician	2
Inhalation Therapist	2
Medical Record Technician	2
X-ray Technician	2
Home Health Aide	1
Medical Record	1
Dental Assistant	1
E. E. G. Technician	1
Hospital Pharmacist Aide	1
Funeral Parlor Assistant	1
Medical Secretary	1
Dietary Aide	1
Dental Lab Technician	0

Question: "What present programs should be expanded?"

Replies:	Number of Districts
LPN's & Nursing Assistant	8
None	8
Ward Clerk	6
Operating Room Assistant	3
RN's (Technical Nursing)	2
Dental Lab Technician	2
Inhalation Therapy	1
Environmental Health	1
Optometric Assistant	1

Question: "What are the major deterents to developing and/or expanding health occupation training programs in the vocational schools of your district?"

Rural districts commented as follows:

Replies: "Apparent lack of readiness on the part of major health agencies to provide clinical facilities for training."

"Qualified faculty, clinical practice facilities, release of faculty for program development."

"Limited clinical facilities, limited financial base for program development."

"Must have North Central accreditation. Qualified staff, qualified clinical areas."

"The faculty standards set by Division of Nursing complicated by difficulty for 3-year Registered Nurses to receive credit for their academic work and enroll in pertinent courses that lead them to Bachelor's degrees."

"Rigidity in development procedures, difficulty in developing innovative new types of training programs."

"Approval for clinical experiences for nursing students in health agencies."

"The so-called need for North Central accreditation."

"The Governor's Commission on Nursing has recommended no more practical nursing programs be established. The Nursing Board and the State VTAE are abiding by this directive, i.e., no more LPN programs."

"Need for North Central accreditation."

"Rigidity and inflexibility of approval procedures."

"Prohibition of vocational extension offerings to RN's and LPN's.

"Lack of professional personnel in fields such as Medical Records which limits quality clinical facilities for student education."

NOTE: For the purpose of this Assessment, Districts 1, 2, 3, 5, 14, 15, 16, 17, 18 were considered predominantly rural districts while Districts 4, 6, 7, 8, 9, 10, 11, 12, 13 were considered urban districts.

Urban Districts made the following comments:

Replies: "Advisory Committees, local need studies."

"Authorization by state agencies is slow in coming. Lack of approved clinical stations in hospitals."

"Transfer credit, new facility incomplete, not finished with North Central accreditation."

"Clinical facilities, qualified staff placement, multiplicity of agencies with varying requirements and standards. Aid available for on-going programs only. Need aid to start programs."

"Gaining approval from State approval boards."

"Facilities and faculty."

"Lack of funds primary reason for not starting two newly-approved programs as stated above. Lack of prepared faculty in professional area (need workshops and short term program for faculty).

"Need for better scheduling by all schools of nursing and utilizing clinical facilities."

"Staff, qualified facilities, limitation by State Board of Nursing."

Question: "If you have allied health programs, what were the most difficult problems in developing the programs? Be specific."

Replies:	Number of Districts
Gaining North Central accreditation	7
Lack of Financing	7
Lack of qualified faculty	6
Securing State WVTAE Approval	6
No Problems	4

Finding adequate facilities for clinical practices	4
Requirements of professional organizations	3
Securing State Board of Nursing Approval	3
Developing Curriculum	2
Lack of facilities	1

Question: "What assistance and/or encouragement have been received from:

	Number of Districts
State Board of Nursing or other regulatory agencies	
Excellent	1
Good	6
Fair	5
Poor	0
None (no assistance given)	4
Help Writing Proposals	1
Help Develop Programs	1
State Staff WVTAE	
Excellent	1
Good	2
Fair	4
Limited	3
None (no assistance given)	1
Help in Writing Proposals	4
Technical Assistance	4
Poor	2

	Number of Districts
Health Professional Groups	
Excellent	6
Good	7
Fair	3
Poor	2
None (no assistance given)	

Question: "What types of restraints have you faced, if any?"

Replies:	Number of Districts
Shortage of clinical facilities	5
Shortage of qualified faculty	4
Lack of WVTAE approval	4
None	2
Red tape	2
Lack of State Board of Nursing Approval	2
Lack of North Central Accreditation	1

Over protectiveness of personnel in the field	1
Failure to recognize the validity of local need studies	1
Time factor	1
Limited Finance	1

Question: "What is your placement record for your health occupation graduates?"

Replies:	District
Lab Technician 13 out of 15	District 1
85% of all graduates	District 2
99% of all graduates	District 3
90 to 95% of all graduates	District 4
No programs	District 5
LPN's "no difficulty at all."	District 8
Medical Assistants "great difficulty" Operating Room Assistant - No problem Ward Clerk - No problem Nursing Assistants - No problem	
Good -- all those who want jobs find them	District 9
100% of LPN's	District 10
Excellent	District 11
100%	District 12
90-100%	District 13
100%	District 14
First graduates, Aug. 1971	District 15
No reply	District 16
100% in LPN's	District 17
Very good placement	District 18

Question: "In what allied health areas do you believe additional graduates could be placed?"

Replies:	Number of Districts	
ASSOC. Degree RN's		8
LPN's		6
Laboratory Technician Assistants		5
Operating Room Assistants		4
Occupational Therapists		4
Medical Assistants		2
Nursing Assistants		1
Physical Therapy Assistants		1
Radiological Technicians		1
Dental Hygienists		1
Dental Assistants		1
Pharmacist Assistants		1
Inhalation Therapy		1
Nursing Assistants	1	
Ward Clerks	1	
Medical Records		1
Psychiatric Assistants		1

Observations

Responses clearly indicated that a number of districts believed that health occupations programs should be expanded in their districts and that new programs should be developed.

Directors generally expressed opinions identifying deterents to program development. While some items mentioned might be considered as goals to be achieved or standards to be met, there is clearly a

feeling among many vocational administrators that the "road blocks" to program development in this field are almost, if not in fact, insurmountable.

In response to the questions concerning assistance provided, responses are less positive than might be expected. This may suggest that staffs of the vocational board and regulatory groups should be aware of opportunities to promote, assist and help in overcoming possible restraints to program development.

The placement record of graduates appears to be excellent. There is also indication that additional graduation could be placed in productive health job situations and that there are in fact many, varied opportunities for youth in health occupation.

CHAPTER IV

REGULATIONS, LICENSING AND ACCREDITATION

The responsibility for meeting health care needs and for providing qualified personnel in adequate numbers is a responsibility shared by many agencies and individuals. Among these are the agencies and personnel concerned with State regulations, licensing and accreditation. In Wisconsin, the State Board of Nursing and the State Board of Dentistry are delegated authority by the State to set minimum standards for licensure and/or program accreditation in health occupations. Their role, which is concerned to a great extent with the control of the quality of the personnel practicing in the field, must by implication at least, be concerned also with providing leadership for developing an adequate supply of health practitioners. More succinctly stated, they have a responsibility for not only the quality of the personnel but also for the adequacy of and availability of manpower to provide essential health care for the citizens of Wisconsin.

Regulations Governing Training and/or Practice in the Allied Health Occupational Fields

These regulations in three categories (licensing, registry, and accreditation) affect the development of training programs and, consequently, to a great extent, determine and control the supply of trained manpower in the paraprofessional health fields.

Licensure

Licensure is established by law and covers the following fields: Registered Nurse (RN); Licensed Practical Nurse (LPN); Dental Hygienist; Dental Technologists (DLA) (DLT); and Dental Assistants.

Ideally, licensing laws perform two functions: They protect the public against unfit and inept practitioners of professions or occupations affecting the public health and safety, and they permit various professions and trades to advance from a common set of minimum standards.

The statutory powers and duties of the State of Wisconsin Board of Nursing in providing nursing manpower are as follows:

(1) Establish minimum standards for schools of nursing, professional and practical.

(2) Establish rules to prevent unauthorized persons from practicing professional nursing.

(3) Approve surveys or programs in nursing and determine whether the minimum standards are met.

(4) Place programs meeting the standards on the state accredited list.

(5) Grant certificates of registration and licenses by interstate endorsement.

(6) Award scholarships to graduate registered nurses of Wisconsin for advanced education and promote the training of practical nurses through support of institutes and workshops.

(7) Revoke, suspend, or deny certificates of registration and licenses for cause.

(8) Appoint the members of the Examining Council on Registered Nurses and the Examining Council on Licensed Practical Nurses.

(9) Make a study of nursing education and initiate action to approve it.

Their duties indicate the scope of influence and/or control which the Board of Nursing has, or could have, over the training of manpower in the field of nursing.

Licensing of Registered Nurses and Trained Practical Nurses requires the passing of a written examination prepared by the examining council on Registered Nurses and the examining council on Practical Nurses, respectively, as subject to the approval of the State Board of Nursing.

Members of both councils are appointed by the Board of Nursing upon nomination by Wisconsin Assocation of Licensed Practical Nurses, the Wisconsin Nursing Assocation and the nurse faculties of existing programs. Functions of the councils are to:

(1) Establish rules for the conduct of examinations for professional and practical nurses subject to the approval of the Wisconsin State Board of Nursing.

(2) Select and administer the examination and determine the passing score.

(3) Grant certificates of registration or licenses by examination.

The licensing agent for the dental occupations is the Wisconsin State Board of Dental Examiners. Like the Wisconsin Board of Nursing, the State Board of Dental Examiners is established by statute and empowered to formulate rules and regulations to control the education and/or practice of professional dental health workers in Wisconsin. As is the case with the State Board of Nursing, the State Board of Dental Examiners publishes its rules and regulations as part of the Wisconsin Administrative Code.

National Registry

National professional societies have established a system of national registry which works through a process of both accreditation of training

programs and the administration of national qualifying exams. Unlike licensing, registry carries the force of tradition rather than that of law. The American Registry of Radiologic Technologist (ARRT), the American Association of Inhalation Therapist, and The American Association of Laboratory Technicians are among the most influential professional societies to use registry to control the quality of their membership. The effect of registry is almost as strong as the control of licensure.

Among the professions using registry are:

(a) Cytotechnologists

(b) Histologic Technicians

(c) Medical Laboratory Technicians

(d) Certified Laboratory Assistants

(e) X-ray Technologists

(f) Nuclear Medicine Technologists

(g) Radiation Therapy Technologists

(h) Inhalation Therapy Technologists

Accreditation

The practice of evaluating training programs and/or institutions for many health occupations is both required by law and demanded by national registry requirements as a pre-requisite to acceptance of a health program curriculum. For example, the Wisconsin Administrative Code section N1.02 Legal Authority states:

> The Wisconsin statutes provide that the board may establish minimum standards for schools for nurses and trained practical nurses licensed under this chapter, and make and provide periodic surveys and consultations to such schools. In order to facilitate this responsibility, the board accredits schools and associate units and approves extended units.

The Rules of the State Board of Nursing provide very detailed requirements for nursing programs. Included are such topics as organization and administration of the school, faculty, students, instruction, evaluation, educational facilities, housing, and clinical facilities. The rules are quite precise and obviously designed to assure quality programs. It does not seem appropriate to discuss the specific requirements in detail or even to reproduce them as a part of this report, since copies can be secured by anyone who is directly concerned.

It seems fair, however, to comment generally on the requirements. In the writer's opinion as compared with similar requirements, in other states, they are somewhat rigorous. On the one hand, they may be viewed with a source of pride in that they represent optimum requirements of which the State may be justly proud. Looking at them from the prospective of vocational education administrators struggling to meet program demands, they are viewed by many as too restrictive and difficult to meet. This, coupled with the fact that school administrators in vocational education have been used to working in an administrative framework where there was considerably more latitude and local autonomy in their program development and operation, seem to place in many cases, school administrators in almost an adversary relationship with those charged with enforcing the rules.

Accreditation by Other Organizations

The Rules of the State of Wisconsin Board of Nursing requires that: An institution which conducts a school or which serves as an associate or extended unit shall be approved/accredited by recognized agencies. These include:

(a) North central association of colleges and secondary schools. The degree granting institution conduting a basic program in nursing shall be accredited by the north central association of colleges and secondary schools or show evidence of recognized candidacy for accreditation. This accreditation is also required of a college or university which provides courses for students enrolled in a diploma program in nursing.

(b) Joint commission on accreditation of hospitals. 1. A hospital which provides one or more of the 5 major clinical fields (medical, surgical, pediatric, obstetric, and psychiatric) shall be accredited by the joint commission on accreditation of hospitals.
2. Nursing homes and extended care facilities shall be accredited by the joint commission on accreditation of hospitals.

While a number of directors have suggested that the requirement of accreditation by North Central Association of Colleges and Secondary Schools has been a problem, with the exception of schools in a few districts, this hurdle has been overcome. (See Table 18).

TABLE 18

NORTH CENTRAL STATUS
OF VTAE DISTRICTS

District	Status
1	Candidate
2	Candidate
3	Application filed - Decision, July 1971
4	Accredited
5	Correspondent
6	Accredited
7	Correspondent
8	Coorespondent - will have candidate status this year
9	Accredited
10	Correspondent
11	Correspondent
12	Correspondent
13	Correspondent
14	None
15	Accredited
16	Correspondent
17	None - beginning to get information
18	None

It should be noted that a number of health occupations are not regulated by either licensure, national registry or program accreditation. These educational programs depend only on the internal approval of the governing bodies of the training facilities and the WVTAE Board in the case of the vocational system.

The following health occupations are among those generally not regulated by licensure, registry or accreditation: Nursing--Nursing Assistant, Ward Clerk, School Health Aide, Operating Room Assistant; Para-Medical--Electroencephalograph Technologist, Occupational Therapy Assistant, Physical Therapy Assistant, Inhalation Therapy Assistant, Environmental Health Technologist, Medical Electronics Technologist, Radiological Technician, Medical Record Technologist, Optometric Assistant.

Conclusion

Vocational educators continue to be frustrated in program development in health occupations because of the many controls by regulatory bodies, the professional groups, and accrediting agencies. Rules and practices established in good faith are often found to be, or are interpreted as restrictive in program development and operation. Some rules are believed responsible for requiring unnecessary program expenditures.

It is not the writer's intention to pass judgment on the requirements because this can only be accomplished by those responsible for establishing them. However, it does seem appropriate to suggest concerns expressed. Hopefully, educators, those responsible for establishing and administering standards, professional groups and consumers of health services will continue to review and bring about changes in requirements if they are found to be restrictive to providing health manpower as opposed to the positive effect of assuring quality personnel for which they were designed.

CHAPTER V

RECOMMENDATIONS

Following are the recommendations of the Wisconsin Advisory Council on Vocational Education which were discussed, refined and approved at a full day meeting on July 28, 1971.

In presenting these recommendations, the research team and the Advisory Council wish to state clearly that the Wisconsin Board of Vocational, Technical and Adult Education is to be commended for the development of the many programs in the health occupations area and for the growth projected in the next few years. The concern of the leadership in Wisconsin for maintaining high quality is commendable. There is little question but what programs in operation are of fine quality.

Recommendation 1

That the Wisconsin Board of Vocational, Technical and Adult Education undertake to adopt those policies which will facilitate greater growth of health occupations workers in the rural areas of Wisconsin through the expansion of educational programs, both job entry and continuing education.

Statement: To a great extent, program development has been concentrated in the more populated areas of the State, a factor which appears to create geographical gaps in needed training programs in the more rural areas. The health manpower needs and consequent requirements for providing training opportunities

in the rural areas of Wisconsin are not being met at the present time through existing vocational and technical programs.

Recommendation 2

That the Wisconsin Board of Vocational, Technical and Adult Education, prior to Board approval or disapproval of a potential (proposed) health occupations program, encourage in each of the 17 districts the development of a think committee to study and evaluate needs for health workers by type in that district. Composition of this committee should include a broad representation of health professionals, health planners, civic leaders, consumers and vocational educators.

Statement: Growing public concern with the high cost of health care, the quality and availability of health services, and the accessibility into the health system makes it imperative that the consumer be represented on health education planning committees.

President Nixon, in a recent speech before the American Medical Association convention warned that unless health professionals listen to public opinion, the U. S. may well be headed toward socialized medicine. The concept of health care as an inherent public right, rather than a privilege, is the basis of all eight major national health care insurance proposals introduced in either the House or Senate. Health care institutions have been encouraged by their national organizations to include an increasingly broad representation of consumer interests on their governing boards. With Americans demanding ever improved health care, and with consumer interest in health stimulated by media

criticism of the health system, it is only logical that the consumer be involved in health planning at all levels, including manpower training and education.

Recommendation 3

The Wisconsin Board of Vocational, Technical and Adult Education should continue discussions with the State of Wisconsin Board of Nursing in order to review the current licensing and accreditation policies in an attempt to better meet the health care needs of Wisconsin's citizens by providing adequate training programs equally available to all.

Statement: Because of public demand for improved health care closely allied with an identified need for health manpower, it is believed that the Wisconsin Board of Vocational, Technical and Adult Education should give financial and leadership priority toward encouraging the accelerated development of quality programs.

By 1975, the health care industry is expected to become the nation's largest single employer with one of every 16 persons working in some form of health care. Projections from the U. S. Census Bureau forecast that health workers will increase from 6.0 to 7.5 percent of the nation's total nonagricultural labor force in the decade from 1970 through 1980. These same statistics indicate that national health expenditures will also grow from $67.2 billion in 1970 to $172.5 billion in 1980, a total of 8.19 percent of the Gross National Product.

In view of this unprecedented growth, it would seem appropriate that responsible bodies should compare the requirements of the State of Wisconsin Board of Nursing with the requirements

of similar agencies in other states in circumstances where such criteria appear to be restrictive to program development and, consequently, work toward implementing changes within State Board requirements.

In a recent policy statement[1] (November, 1970) calling for a nationwide moritorium on licensure, the American Hospital Association made these observations:

> To the extent possible, licensure laws should contribute to sound solutions and not constitute obstacles to the delivery of health services.
>
> The need for a change in licensure is well-documented in the literature and in practice. The issues are complex. Many vested interests are affected. The job at hand is to elicit mutual cooperation from professional groups, educators, employers, and legislators and proceed with a unified effort toward implementing short-range improvements. Such cooperative efforts will provide time for the development and implementation of long-range solutions.

Recommendation 4

The control and coordination function of the staff of the Wisconsin Board of Vocational, Technical and Adult Education should be designed to encourage district personnel to fully explore and innovate in the development of new programs in the health occupations area.

Statement: The survey of the 18 WVTAE districts seemed to indicate that in many districts, directors have been discouraged in any attempt to explore or plan for health occupations programs. At best, there is little evidence that state staff leadership has aggressively promoted program expansion in the smaller districts.

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[1] Statement on Licensure of Health Care Personnel, (Chicago: The American Hospital Association, November 18, 1970), p. 1.

Recommendation 5

Because multiple studies have shown that licensed practical nurses tend to be employed in the geographic areas in which they have had preparation, it seems imperative that efforts be made to develop practical nursing training programs in the more rural areas where the needs are urgent and to look for alternative ways to provide for health manpower, such as scholarships or other support which might be tied to providing service in the less populated areas.

Statement: The problem of meeting health manpower needs may require a number of alternative plans, depending upon the area to be served. Providing the training in the area is one solution with some promise; however, it may call for modified programs and changes in requirements for clinical experiences. Another incentive which might be explored is to provide financial subsidies for training persons who consent to work in less heavily populated areas.

Elliot Richardson, Secretary of Health, Education and Welfare, in testimony to the House Subcommittee on Public Health and the Environment on April 20, 1971, made the following statement:

> Although progress has been made (in providing government support for health manpower training programs), it has become increasingly clear that greater efforts are needed to provide health personnel of the right kinds in the right places. It is not enough to merely train additional numbers. We must also encourage trained personnel to practice their skills in the service, setting and geographic areas where they are needed most, and where they can make the greatest contribution to the health care of the nation.

Recommendation 6

It is recommended that a plan be developed for more effective utilization of institutions of higher education in the pre-service, in-service, and continuing education of health education faculty of the WVTAE system.

Statement: If one of the most frequently cited deterents to health occupation education program expansion is, indeed, a shortage of qualified staff, then action should be taken to encourage Wisconsin's universities to provide programs to meet the professional growth needs of existing WVTAE health occupations faculty.

Recommendation 7

Experimentation in new approaches to implementing health education programs should be encouraged. Such experimentation should provide for the relaxation of selected existing requirements.

Statement: The recommendation seems justified since the report of the Commission on Statewide Planning for Nursing Education in Wisconsin indicates that 52% of hospital nursing personnel are nursing assistants. It is recommended that the preparation at a higher level, both practical and professional nurses, be augmented. If nursing home figures had been reported, it is assumed that the ratio of nursing assistants to more qualified professions would be even more dramatic. Provisions should be made to permit faculty recruiting from the best qualified of the various health occupations (as instructors and other supporting personnel) based on their competencies rather than an exclusive consideration of degree or other academic qualifications.

Recommendation 8

The recommendations of the Commission on Statewide Planning for Nursing Education in Wisconsin should be reviewed critically in light of changing conditions and continued demands for nursing personnel prepared at all levels and in all areas of the State.

Statement: The weaknesses of the Commission's report relate to the fact that the adequacy of personnel for specific geographical areas was not considered; also, that conditions have changed since the data were collected, particularly in relation to the closing of several hospital schools.

Recommendation 9

The Wisconsin Board of Vocational, Technical and Adult Education should initiate a cooperative study involving both members of the State Staff and personnel in the area of health occupations education from the various districts to investigate means of eliminating major barriers to program development.

Statement: In the survey of districts, the barriers most often identified relate to lack of qualified staff, lack of school facilities, lack of clinical facilities and finances. Existing barriers should be scrutinized to determine whether, with some modification, these obstacles could be overcome, thus permitting the development of more training programs.

Recommendation 10

Consideration should be given to establishing new cooperative programs in the training of allied health personnel, thereby making fuller use of

Wisconsin's unique clinical facilities such as the Marshfield Clinic, Southern Colony, Central Colony, Mendota State Hospital, etc.

Statement: Since the lack of adequate facilities was often cited as a limitation to program growth, the WVTAE staff should undertake to explore new means of cooperation between health facilities and the district schools as a means of reducing this facility problem. Wisconsin has many fine health institutions throughout the State, and the maximum utilization of these facilities is essential to future WVTAE health occupation programs growth.

This "consortia" approach, originally defined in the concept of Area Health Education Centers by the Carnegie Commission Report of 1970, Higher Education for the Nation's Health, has now been introduced as federal legislation to provide funding for such centers. Elliot Richardson, in his testimony before the House Subcommittee on Public Health and the Environment (April 20, 1971), noted that the Nixon administration would provide "targeted support" for cooperative arrangements among educational institutions and service institutions.

"Health manpower education must be related more directly to the provision of health care, and we must make the most effective use of existing as well as new health manpower training resources," Richardson noted. Other provisions included in the administration's proposed Health Manpower Assistance Act of 1971 (all integral parts of the consortium concept) are interdisciplinary training for team techniques in the provision of health care; training health personnel in geographic areas in need of health

manpower; programs to develop selected categories of personnel related to health care (physicians assistants, pediatric nurse practitioners, etc.) and advance training programs for teachers or administrators, for which there is special need.

Recommendation 11

The Wisconsin Board of WVTAE should conduct an exploratory study with the Board of Dental Examiners to determine how to best expand the allied health training programs in the dental fields.

Recommendation 12

That more scholarships be established to provide for financing baccalaureate and advance degree education for present and potential health occupation educators working in the WVTAE system.

Statement: In order to advance the academic level of health occupation faculty within the VTAE system, the State Board should facilitate professional growth from within, as well as encourage advanced education for those who may be recruited.

Recommendation 13

The Wisconsin Vocational, Technical and Adult Education system should participate and cooperate with other state government agencies such as the Bureau of Planning, the Wisconsin State Employment Service, the Bureau of Comprehensive Health Manpower Planning, Regional Medical Program, and the Governor's Task Force on Health Programs in exploring ways of establishing a computer-based health occupation information system.

Statement: The current lack of specific, up-to-date health manpower data is a severe limitation to the planning of effective programs in the health field. If WVTAE hopes to meet the future needs of Wisconsin citizens in the health education field, it will need a better information system upon which to base its plans.

The most recent report on Wisconsin's health manpower needs is the "Hospital Manpower Survey" conducted in 1969 by the Section of Statistical Services, Bureau of Health Statistics. Distributed early this spring, the report contains data almost two years old, and does not consider the manpower needs of nursing homes, public health agencies or private clinics.

Other states have recognized the need for an on-going program of health manpower data collection. In Illinois, for example, the Health Careers Council in August, 1970, received a grant of $58,000 from the Illinois CHP agency to do preliminary studies leading to the creation of a "statewide intelligence system on health manpower resources." The project will seek to identify all activities in the State that are sources of manpower information, suggest more critical areas of need, and, hopefully, establish the basis for an on-going central resource of information and advice on health manpower to local health planning activities.

Both the lack of current health manpower information and any existing research data relative to future health manpower needs seriously impedes health manpower education program development. Such research, particularly as manpower needs

relate to comprehensive health planning activities in the State, is vitally necessary for future program considerations.

Recommendation 14

The Wisconsin Vocational, Technical and Adult Education system, in concert with professional and regulatory groups, should formulate admission policies and provisions for credit or advanced standing which would facilitate the continued health occupation education of ex-medics returning from the military.

Recommendation 15

That the secondary school programs in the health occupations areas be expanded and directed toward exploring student vocational interests and abilities as they relate to health fields.

Statement: Since the majority of health fields require much greater in-depth training than it is currently possible to offer in Wisconsin high schools; and since most clinical experiences for high school students are limited because of age requirements, it would appear that high school programs in health occupations should be of a survey nature, a broad introduction to the various opportunities available in health careers. Such programs can best meet the students' needs by recruiting young people into post-high school training in health fields following their graduation.

APPENDICES

APPENDIX A

SELECTED HEALTH OCCUPATIONS PROGRAMS

Program Title: DENTAL ASSISTANT

Course Length: 9 Months (Diploma) D.O.T. Code: 079.378

Job Description: Dental Assistants work for an individual dentist or two or more dentists sharing the same premises. They greet patients when they arrive, make them comfortable, prepare them for examination or treatment and give chair-side assistance to the dentist.

Typical Course of Study:

First Semester	Second Semester
Dental Anatomy and Related Laboratory Procedures	Dental Laboratory Procedures
Dental Theory I	Dental Theory II
Dental Therapeutics I	Dental Therapeutics II
Chairside Techniques I	Chairside Techniques II
Body Structure	Dental Practice Administration
Professional Orientation for Dental Auxiliaries	Related Accounting
Typewriting I	Psychology of Human Relations
Communication Skills I	Communication Skills II

Education and Other Requirements: Be a high school graduate or have equivalency certificate (preferably); have personal characteristics suitable for public contact work in regard to dress and personal hygiene; be able to type; have a pleasant telephone voice; be a graduate of an approved course for Dental Assistants (preferably).

Program Title: DENTAL HYGIENIST

Course Length: 18 Months (Associate Degree) D.O.T. Code: 078.368

Job Description: Dental Hygienists clean patients' teeth, administer prescribed medicaments, take and develop X-rays, sterilize instruments, and act as chair-side assistant to the dentist.

Typical Course of Study:

First Year	Second Year
English Composition I	Sociology I
Chemistry	Histology and Embryology
Anatomy and Physiology	Emergency and Surgical Procedures
Dental Anatomy	Pharmacology
Orientation to Dental Care	Clinical Dental Hygiene II
	Economics
English Composition II	Introduction to Psychology
Clinical Dental Hygiene I	Hygiene
Dental Materials and Technology	Clinical Dental Hygiene III
Pathology	Social Aspects of Dental Hygiene
Microbiology	Speech
Nutrition	Dental Practice Administration

Program Title: DENTAL LABORATORY ASSISTANT

Course Length: 18 Months (Associate Degree) D.O.T. Code: 712.381

Job Description: Dental Laboratory Assistants construct and repair dentures and dental appliances such as teeth, crowns, or bridges according to prescriptions and impressions furnished by a dentist.

Typical Course of Study:

First Year	Second Year
Tooth Structure and Carving	Crown and Bridge Techniques 2
Complete Denture Techniques 1	Crown and Bridge Techniques 3
Dental Orientation and Terminology	Dental Metallurgy
Communication Skills 1	Dental Ethics
Technical Mathematics 1	Psychology of Human Relations
Fundamental Science	American Institutions
Complete Denture Techniques 2	Crown and Bridge Techniques 4
Partial Denture Techniques	Dental Ceramics and Precision Attachments
Science of Dental Materials	Legal Aspects and Professional Relationships
Communication Skills 2	Problem Clinic
	Physical Education
	Business and Industrial Relations

Program Title: INHALATION THERAPIST

Course Length: 18 Months (Associate Degree) D.O.T. Code: 079.368

Job Description: Inhalation Therapists set up and operate various types of medical gas administration equipment, such as iron lungs, oxygen tents, resuscitators, and incubators to administer oxygen and other gases to patients.

Typical Course of Study:

First Year

Orientation to Inhalation Therapy
Fundamentals of Inhalation Therapy
Communication Skills 1
Technical Mathematics 1
Anatomy and Physiology
Psychology of Human Relations
Chemistry
Communication Skills 2
Technical Mathematics 2
Microbiology
Physical Education

Second Year

Pulmonary Physiology
Inhalation Therapy Applications and Procedures 2
Clinical Inhalation Therapy Experiences 2
Technical Science 1
American Institutions
Inhalation Therapy Applications and Procedures 3
Clinical Inhalation Therapy Experiences 3
Bacteriology and Pharmacology
Basic Economics

Program Title: MEDICAL ASSISTANT

Course Length: 9 Months (Diploma) D.O.T. Code: 079.368-022

Job Description: Medical Assistants, under the direction of physicians, assist in the examination and treatment of patients.

Typical Course of Study:

First Semester

Medical Office Practice and Procedures I
Medical Laboratory Procedures I
Medical Terminology I
Human Body in Health and Disease I
Personal, Vocational Relationships I
Related Accounting
Communication Skills I

Second Semester

Medical Office Practice and Procedures II
Medical Laboratory Procedures II
Medical Terminology II
Human Body in Health and Disease II
Personal, Vocational Relationships II
Typewriting II
Communication Skills II

Program Title: MEDICAL LABORATORY ASSISTANT

Course Length: 12 Months (Diploma) D.O.T. Code: 073.381

Job Description: Medical Laboratory Assistants perform routine tests in a medical laboratory, under the direct supervision of a registered medical technologist and pathologist or other qualified physician for use in treatment and diagnosis of disease. This program should not be confused with that of the registered medical technologist.

Typical Course of Study:

First Semester	Second Semester
Laboratory Procedures IA	Laboratory Procedures IB
Laboratory Procedures IIA	Laboratory Procedures IIB
Medical Laboratory Records I	Medical Laboratory Records II
Orientation to Para-Medical I	Orientation to Para-Medical II
Terminology I	Terminology II
Elementary Chemistry	Body Structure

Summer Session
Laboratory Procedures IC
Laboratory Procedures IIC
Trends and Issues in Laboratory Assisting

Program Title: NURSING TECHNICAL

Course Length: 18 Months (Associate Degree) D.O.T. Code: 075.378

Job Description: An associate degree nurse assists in planning of nursing care, gives general nursing care and assists in the evaluation of the nursing care given.

Typical Course of Study:

First Year	Second Year
Orientation to Nursing	Nursing in Physical and Mental Illness 2
Nursing Fundamentals	Nursing in Physical and Mental Illness 3
English 1	Physical Education
Anatomy and Physiology	Elements of Speech 1
Microbiology	Maternal and Child Health 1
Chemistry	Maternal and Child Health 2
Nursing in Physical and Mental Illness 1	Professional Trends
English 2	Basic Economics
General Psychology	

Summer Session

Introduction to Sociology
Child Psychology

Program Title: OCCUPATIONAL THERAPY ASSISTANT

Course Length: 9 Months (Diploma) D.O.T. Code: 079.368

Job Description: Occupational therapy assistants assist in the rehabilitation of patients through the use of supportive or maintenance activities and to assist in providing activities such as arts and crafts.

Typical Course of Study:

Human Relations
Orientation to Growth and Development
Health Concepts
Supervised Field Experience in Geriatrics and Psychiatry

Program Title: OPERATING ROOM ASSISTANT

Course Length: 9 Months D.O.T. Code: 079.378

Job Description: Operating Room Assistants assist the nursing and medical staff before and during an operation.

Program Title: WARD CLERK

Course Length: 1 Semester (18 Weeks Diploma) D.O.T. Code: 219.388

Job Description: Ward Clerks prepare and compile records in hospital nursing units such as obstetrics, pediatrics, or surgery.

Typical Course of Study:

Communication Skills
Medical Terminology
Body Structure
Ward Clerk Procedures
Applied Psychology

Program Title: OPTOMETRIC ASSISTANT

Course Length: 9 Months (Diploma)

Job Description: Optometric assistants assist in making tests to determine defects in vision, prepare and fit eyeglasses or contact lenses, administer corrective eye exercise and other treatment that does not require drugs or surgery.

Typical Course of Study:

First Semester	Second Semester
Communication Skills I	Communication Skills II
Optometric Accounting	Personality Development
Filing	Dispensing II
Anatomy and Physiology	Visual Training
Optometric Terminology	Office Practice and Procedures
Optometric Assistant	Optometric Clinical Procedures
Typewriting	Optometric Clinical Experience
General Optics	Occular Anatomy and Physiology
Dispensing I	Personal and Vocational Relationships

Program Title: PRACTICAL NURSING

Course Length: 12 Months (Diploma) D.O.T. Code: 079.378

Job Description: Practical nurses participate in the nursing care of patients under the supervision of a physician or registered nurse.

Typical Course of Study:

First Semester	Second Semester
Communication Principles I	Care of Mothers & Infants
Social Behavior	Mental Nursing
Foundation to Nursing I	Personal & Vocational Relationships
Foundation to Nursing II	Medical Surgical Nursing of All Ages I
Nursing Fundamentals	Medical Surgical Nursing of All Ages II
Chronic-Aged Hospital 9 weeks	Medical Surgical Nursing of All Ages III
Orientation	Child Care
	Advanced Medical Surgical Nursing

APPENDIX B

LETTER SENT TO WVTAE DIRECTORS

March 19, 1971

Dear

As a part of the assessment study for the Wisconsin Advisory Council on Vocational and Technical Education, we are looking into the allied health occupations. It is the belief of at least some members of the Advisory Council that programs in this field should be greatly expanded. While there have been several manpower studies, they appear to have some shortcomings, particularly in that some have considered the needs of the State as a whole but have not reflected geographical needs. Others may reflect a degree of protectiveness of a professional group. However, two things seem to be clear: (1) the health manpower needs in a number of the allied health occupations are not being met and (2) it takes great energy and commitment on the part of a District to expand programs in this area.

It is beyond the scope of our assessment to conduct an independent manpower needs study; however, we hope to synthesize studies available. We also hope to determine what restraints or problems are encountered in expanding programs.

The enclosed questionnaire is meant to be open-ended, so please provide us with any thoughts you have on the subject. Individual responses will be used only by our survey staff, so please feel free to be completely candid in your remarks.

Your helpfulness will be greatly appreciated.

Sincerely yours,

Merle E. Strong
Chairman
Department of Educational Administration

MES:smm

APPENDIX C

VTAE DISTRICT HEALTH OCCUPATIONS QUESTIONNAIRE

Please answer the following questions concerning the field of allied health occupations in as great a detail as possible. Include copies of any recent studies concerning health occupations manpower needs in your area. Feel free to add other information not called for in this questionnaire which you believe would be helpful to the Advisory Council's assessment.

1. What information do you have as to recent studies and actual numbers determined for health manpower needs in your area?

2. What programs for training allied health occupation personnel are currently being offered by the vocational schools in your district?

Program	Enrollment
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. What is the ratio between the number of students applying for admission into health occupation training programs in your schools and the number of students accepted for training in those programs? (Please indicate the ratio for each program.)

4. What criteria is used for selection?

5. What new programs in the field of health occupations do you feel should be developed by the vocational school (or schools) of your district?

6. What present programs should be expanded?

7. What other agencies (hospitals, private schools, university extensions, or colleges) now offer training for health occupations in your area? (Please indicate the types of programs and approximate numbers of students concerned.)

8. What are the major deterents to developing and/or expanding health occupation training programs in the vocational schools of your district? Be specific.

9. If you have allied health programs, what were the most difficult problems in developing the programs. Be specific.

10. Are you considering starting new programs? Yes _____ No _____

    (a) For what occupation _____ _____

    _____

    _____

    (b) Have you made application to the State Board of Vocational, Technical and Adult Education?

11. What assistance and/or encouragement have you received from:

    (1) The State Board of Vocational Education Staff,

    (2) The State Board of Nursing or appropriate regulator agency,

    (3) Professional groups.

12. What types of restraints have you faced, if any?

13. What is your placement record of your Health Occupations graduates?

14. In what allied health areas do you believe additional graduates could be placed?

VT 016 793
WILEY, LYNDALL H.;DAVIS, PERRY
A DEMONSTRATION OF REALITY TRAINING THROUGH SIMULATION IN CLERICAL OFFICE PRACTICE. FINAL REPORT.

MERCER COUNTY BOARD OF EDUCATION, PRINCETON, W. VA.
WEST VIRGINIA STATE BOARD OF EDUCATION, CHARLESTON. DIV. OF VOCATIONAL TECHNICAL EDUCATION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - JUN 72 14P.

DESCRIPTORS - INSTRUCTIONAL INNOVATION; CURRICULUM DESIGN; *PILOT PROJECTS; EDUCATIONAL STRATEGIES; INSTRUCTIONAL PROGRAMS; *CLERICAL OCCUPATIONS; *BUSINESS EDUCATION; *TECHNICAL EDUCATION; *SIMULATION
IDENTIFIERS - AMERICAN PAPER EXPORTERS ASSOCIATION; APEX

ABSTRACT - A RECOGNITION OF THE NEED FOR MORE PROFICIENT AND DEDICATED CLERICAL EMPLOYEES LED TO THE DEVELOPMENT OF THIS PROJECT BASED ON REALISTIC AND BUSINESSLIKE ENVIRONMENTAL CONDITIONS. THE IMPLEMENTATION OF APEX, THE AMERICAN PAPER EXPORTERS ASSOCIATION PROJECT, IS DIVIDED INTO 3 PHASES: (1) THE ORIENTATION PERIOD, IN WHICH STUDENTS ARE FAMILIARIZED WITH MATERIALS AND OFFICE MACHINES, (2) THE TRANSITION PERIOD, WHERE THE CLASSROOM IS TRANSFORMED INTO AN OFFICE-LIKE SETTING AND JOB PREPARATORY TASKS CONDUCTED, AND (3) THE SIMULATION PERIOD, CHARACTERIZED BY JOB ASSIGNMENTS AND PROMOTIONS. DESIGNED FOR A CLASS OF 20, ON A PLANNED BLOCK OF TIME FOR 3 CONSECUTIVE HOURS, 5 DAYS A WEEK, THE PROGRAM MAY BE USED WITH AS FEW AS 8 STUDENTS. A TOTAL OF 36 MODULES OR INSTRUCTIONAL WEEKS CONSTITUTE THE COURSE; HOWEVER, THE WORK LOAD MAY BE INCREASED OR DECREASED BY THE TEACHER, SHORTENING OR LENGTHENING THE TIME USED FOR EACH MODULE, TO ACCOMMODATE STUDENTS' NEEDS AND ABILITIES. CENTERED AROUND THE OFFICE MANAGER'S GUIDE, THE COURSE PROVIDES EXPERIENCES WHICH TEACH SKILLS AND FACTUAL CONCEPTS SIMULTANEOUSLY. (SN)

VT 016 793

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Final Report

Project No. W.Va.-72-R-3

Grant No. DVE-25-W.Va.-72-R-3

A Demonstration of Reality Training Through Simulation in Clerical Office Practice

Lyndall H. Wiley
Perry Davis

Mercer County Board of Education
1420 Honaker Avenue
Princeton, West Virginia 24740

June, 1972

West Virginia
State Board of Education
State Department of Education
Bureau of Vocational, Technical and Adult Education
Division of Vocational Education

VT016793

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EDUCATION & WELFARE
OFFICE OF EDUCATION
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The work presented or reported herein was performed to a grant with the State Board of Education, Division of Vocational Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the State Board of Education, and no official endorsement by the State Board of Education shall be inferred.

West Virginia
State Board of Education
State Department of Education
Bureau of Vocational, Technical and Adult Education
Division of Vocational Education

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I. SUMMARY

Traditionally, there has been an overlapping of subject matter and skill development in business education courses and as a result, students have failed to get a realistic approach in their occupational preparation. Through a planned block of time, it is now possible to integrate instruction and work experience and to teach the required office skills and knowledges simultaneously.

The purpose of APEX, the American Paper Exporters Association, is to create a situation which would help the instructor to correlate the teaching of skills and knowledges with work experience in a realistic setting. Through this project the classroom, which has been transformed into an office, is supplied with the input materials that make it possible for students to function as employees in an office type situation. The office is supervised by the instructor who acts as office manager. All activities and operations of the business are explained in the Office Manager's Guide, which is the heart of the program as it contains suggestions and detailed procedures for implementing the project. Although APEX is basically designed for a class of twenty students, on a planned block of time for three consecutive hours, five days a week, it is possible to have a smooth operation with as few as eight students by omitting the positions of design and copy clerks.

The three divisions of APEX are the Statistical Division, the Information Services Division, and the Office Services Division. These divisions can be staffed with almost any number of employees, or the instructor may wish to omit one or two divisions. The instructor has maximum freedom in implementing the program to meet his needs.

The program is organized into thirty-six "modules" or weeks of instruction which correspond with the number of weeks in the regular school year. However, depending on the amount of time available, and the number of students and their ability, the instructor may increase or decrease the work load or allow a time longer or shorter than one week to complete the activities of a module. Therefore, a module may refer to one week, ten days, two weeks or any period of time that the instructor may feel is practical. However, a numerical sequence should be followed throughout the year regardless of the number of modules completed.

There are three phases of progression: (1) the orientation period; (2) the transition period; and (3) the simulation period. The first phase or the orientation period is the time at the beginning of the year when students will receive instruction on the machines they will be using in the project and begin preparation of mill reports which are part of the input materials used during simulation. The second phase of the transition period is the next block of time during which the classroom is transformed into an office, students apply for a job, and continue preparation of mill reports. There are nine transition units supported by overhead transparencies which enable the instructor (office manager) to prepare the students for their new roles as employees. The third phase or the simulation period begins as soon as students have completed their interviews. At this time, employees are placed in one of the following ten-entry level positions: mail clerk, file clerk, billing clerk, regional clerk, copy clerk, design clerk, machine operator, receptionist, payroll clerk, and typist. The students remain in these positions for approximately four weeks after which they are promoted to another job. However, depending on the ability of the student, it is possible for him to remain in the same position. As students are rotated to new positions, they get the opportunity to train the employees who replace them as a prerequisite for promotion.

Because of the realistic materials used in this project, it is an exciting and challenging means of presenting the skills, knowledges and attitudes necessary for preparing students for various occupations.

II. INTRODUCTION

Traditionally, business education courses offer a variety of skills as well as knowledge of communications, human relations, and organizational techniques. However, many of these courses have failed to provide realistic training for occupational preparation. There is a lack of integrated instructional materials available for the three-hour block to help bridge the gap between classroom instruction and actual situations. The structure of most materials presently used do not illustrate to the student the relationship of his job to other jobs. In addition, most materials which are now available, do not allow the student to progress at his own rate.

Therefore, as a result of a presentation by a representative of the 3-M Company at a Business and Office Teacher Conference at Cedar Lakes, and a desire to field test, the APEX project was used during the 1971-72 school term in a Senior Clerical Block at the Mercer County Vocational Technical Center. This project is based on true-to-life and businesslike input materials as well as sound educational principles.

Statement of the Problem

It was the purpose of this project (1) to provide an opportunity to integrate instruction and work experience, and to teach the required skills and knowledges simultaneously; (2) to provide a setting which allows for individualized instruction by allowing the student to move from one position to another on the basis of his own ability; (3) to provide experiences in which the student learns the relationship of his job to others; (4) to provide experiences in which the student learns the basic responsibilities employees assume when accepting employment; and (5) to provide the student the opportunity to take an active part in training other employees as a prerequisite for promotion.

III. METHOD

APEX---The American Paper Exporters Association is an association modeled after a real service organization promoting the interests of the United States Paper Industry, with the instructor acting as office manager. He supervises three divisions each staffed by students referred to as employees throughout the course. The program is basically designed for as many as twenty students and as few as ten for a three-hour block of time, five days a week. However, due to a limited number of students, the project began with eight students, and completed with six.

There are ten-entry level positions, but it was necessary to eliminate the positions of design and copy clerks during the first semester and then to combine some positions during the second semester as two students had to make schedule changes. The program is flexible enough to permit whatever combination of jobs the instructor feels is workable.

APEX is set up in thirty-six "modules" or weeks of instruction, corresponding to the regular school year, each involving a number of tasks and activities to be performed. However, since the number of office personnel was much smaller, and the project did not begin until the second six weeks of school, all modules were not completed after completion of the fourth module, most of the "weeks" follow the same basic pattern. Depending upon the amount of time available, the number of students and their ability, the instructor may increase or decrease the work load or allow a time longer or shorter than one week to complete the activities of a module. A module refers to one week, ten days, two weeks or any period of time the instructor feels is needed. The instructor has maximum freedom in carrying out the activities of the project. However, for the best results a numerical sequence should be maintained throughout the year at least until after completion of the sixteenth module.

There are three phases of progression in carrying out the activities of the project: (1) the orientation period (2) the transition period and (3) the simulation period.

The first phase or the orientation period is the block of time at the beginning of the project when students receive instruction on the office machines they will be using throughout the simulation. Since instruction on machines had begun before the initiation of the project, I spent approximately two weeks here. However, the instructor may spend from two to six weeks depending on what he feels is necessary for his particular class. During this time, students also can begin preparing "mill reports" which will be part of the input materials during the simulation period. The instructor will need to study the Office Manager's Guide and review all the materials in order to organize and prepare for operation.

The purpose of the second phase or the transition period, which is approximately two weeks in length, is to familiarize students with the policies and procedures of APEX, to prepare them for making application for the job of their choice, the interview, and placement. There are nine transition units supported by overhead transparencies which the instructor uses to facilitate the transition from classroom to office. Through the visuals, the instructor is able to introduce the students to the history, the goals, the policies and the procedures of APEX. After each day's presentation of these materials, some of the students, now referred to as applicants, continued to prepare mill reports while others were being interviewed. During this time, students also composed and wrote letters for subscriptions to trade magazines and free materials pertaining to the paper industry to be used in the resource library.

After all applicants were interviewed and placed and mill reports were completed for the first thirty weeks, the employees were prepared for their first day on the job. Through the use of the transparencies they were given an outline of the first day's activities. At this time, all employees completed such personnel forms as withholding exemption certificates, insurance forms, parking permits, time cards, etc. In addition, each employee was presented his own Employees Handbook which spells out what is expected of an employee in terms of performance, office procedures, personal conduct, efficiency and resourcefulness. The handbook also contains a description of each job with step-by-step procedures which each employee is to apply in carrying out the responsibilities and duties connected with the position to which he has been assigned.

The third phase or the simulation period begins after placement of the employees in one of the ten-entry level positions. As stated previously, it was necessary at the

beginning of this project to eliminate the positions of design and copy clerks, and finally to combine some positions in completing the project.

In order to implement these three phases of the program, the instructor must be thoroughly familiar with the Office Manager's Guide which outlines suggestions and procedures to be followed in carrying out the operations of APEX. At the end of the first month's operations, all employees are rotated to another position where they remain until the end of the second month and so on. Each employee has the responsibility of training the new employee who takes his position, thereby learning that training other employees is a prerequisite for promotion.

For each week or module, the following input materials are needed regardless of the time assigned: one mail input envelope; fifty mill reports previously prepared; one meeting unit; one critical incident; and part of one special project.

The mail input envelopes each contain about thirty-five pieces of incoming mail so that the office manager can place an average of seven letters in the incoming mail each day. The letters are divided into groups with suggested replies given in the Office Manager's Guide. Letters coded "D" require the office manager to dictate a suggested reply to be transcribed on the transcribing unit. Letters coded "C" indicates that the replies may be composed by the employee. However, a few basic directions were usually outlined by the instructor on all letters. Letters coded "R" indicate that some research must be done by the employee handling this letter, and requires him to use information from the Master's Book which contains samples of all office forms, information for mill reports and materials for research.

Another of the input materials are the mill reports which serve as the basis for most of the publications of APEX. Fifty mill reports are distributed to the regional clerk or clerks who compile the information on the appropriate worksheets. These worksheets are reproduced and the results mailed to all member mills with a cover letter. This activity gives the employees experience in addressing form letters, addressing envelopes and handling bulk mailing.

The next group of input materials are the thirty meeting units which deal with a variety of topics. Each of these units is in a separate folder with transparencies and background information which deal with the development of skills, knowledges, and attitudes. Sometime during the week, either at the beginning or the end preferably, a staff meeting will be held. The Office Manager's Guide suggests that the meeting will be held on Tuesday's, and this is the day that meetings

were usually scheduled. The first few meetings may be con-

were usually scheduled. The first few meetings may be con-
ducted by the office manager with each employee thereafter being responsible for at least one meeting. However, with the small group of students in the project it found that after a few presentations by students, it worked better if the instructor conducted the meetings with assistance if needed from the staff.

Another of the materials for input are the fifty-two critical incidents which can be scheduled at any time the instructor feels there is a suitable situation. For example, the incidents regarding checks for the wrong amount, etc. were coded on each letter to which it pertained.

In addition to the other materials described, the office manager may, at any time, begin a special project. Suggestions for completing each phase of the project accompany it. The office manager may give the responsibility of the project to one employee or several if he feels it is necessary. These projects can be worked into the schedule when one employee's work load may be lighter than others or when some employees are able to produce at a faster rate of speed than others. There are also a series of mini projects which may be assigned to individual employees.

A necessary part of any program is the evaluation. Any instructor who attempts this project will have questions regarding evaluation. However, each instructor will basically have to determine how he will evaluate the performance of his employees. All work that went out of our office had to be mailable. As the instructor signed each letter she simply recorded a grade on a chart beside each employee's name. Because of the great amount of correspondence going out of the office, it was extremely easy to get a great number of grades. In addition, a special evaluation sheet is provided to rate the performance of each employee. At the end of the course, each employee was ask to honestly evaluate the program. These evaluations are included in the Appendix.

IV. RESULTS

It is felt that APEX is an exciting and challenging way of teaching the Clerical Block, and as a result, the following were accomplished:

A. Students were more serious about their work because they were working in an office type situation

B. Most students became much better typists and proofreaders

C. Students became more efficient in planning the use of their time and learned to organize the materials for each job more effectively

D. Students learned that in an office everyone must do their part, and they expressed more concern for other people's feelings

E. Students learned to accept responsibility for a particular job and had sense of satisfaction and accomplishment in carrying out that task

F. Some of the students changed their attitude in a positive manner toward certain areas of work as a result of working for APEX; whereas before they had expressed a negative attitude

V. CONCLUSIONS

In my opinion, the structure of the APEX Project permits the following:

A. The classroom can be transformed into an office type situation

B. Students are given the opportunity to see the relationship of their jobs to other employees jobs

C. The instructor may allow students to move from one position to another on the basis of his ability because the structure is very flexible

D. Students are given the opportunity to learn the responsibility that employees assume when they accept employment

E. Students are given the opportunity to take an active part in training other employees as a prerequisite for promotion

F. Students learn to work under pressure and meet deadlines

G. The instructor has a great deal of freedom in implementing the program because of the variety of input materials

H. The program brings realism into the instruction because the materials used are based on real data from actual paper mills throughout the United States.

VI. RECOMMENDATIONS

A. The Project should not be used with fewer than eight students

B. The instructor should have about a month before beginning the project to do the following:

1. Study the Office Manager's Guide to familiarize himself with the program

2. Dictate belts for letters coded "D"

3. Set up rotation schedules and prepare the calendar of duties and responsibilities for first few weeks of operation

4. Collect materials for setting up files

5. Prepare rough drafts of letters to be typed by employees in writing for free materials

6. Review meeting units to decide what other materials need to be brought in and determine in what order the meetings should be presented, particularly if it will be impossible to complete all thirty meetings

VII. SUPPLEMENTARY AND APPENDIX MATERIALS

A. Glossary

1. APEX--American Paper Exporters Association, a fictitious business organization which serves as the means for the simulation.

2. Master's Book--contains a number of removable forms which can be duplicated as the need arises. It also includes information for mill reports and materials for research.

3. Mill Reports--form the basis for most of the publications of APEX.

4. Office Manager's Guide--Serves as the heart of the program as it explains what APEX is, what it does, how it is to be organized, and how the instructor can implement the project.

5. The orientation period--a period of time from two to six weeks during which students have an opportunity to learn the basic skills related to the office machines they will use during the simulation.

6. The transition period--the period of time approximately two weeks in length during which students are prepared for their roles as employees and the classroom is changed into an office.

7. The simulation period--the period of time during which the class operates as an office with the instructor as office manager and the students as employees.

8. Module--is used interchangeably with "week", but the instructor may assign any time value to a module that he feels is necessary to carry out the activities of the office.

B. Student Evaluations

1. Student Number One-I feel that our working for Apex has been a great experience and it is something that we will always remember, and I value it deeply.

   It took a lot of hard work and determination but I really feel it was worth it. Not only did we get to try something new, to see if we like it, but while we worked for Apex, we learned many things--a lot more than we would have if we hadn't had the opportunity to work for Apex, like only reading about the different positions and how the company operates.

   Our class, as a whole, worked together and helped each other out when one of us had more than we could do. When one of us was ill and couldn't make it, all the others would pitch in and do her job for her without too much fuss. I think we really got a chance to understand one another and to share our feelings.

   I feel that since I have been working for Apex, I have become more aware of things and other people's feelings more than I used to be. Also, I feel that I had a responsibility and it was nice to know that the others depended on you.

   If you plan on getting a job after you graduate, Apex is a good way to get all the training that you will need for a bright and successful future.

2. Student Number Two--I liked working at Apex because it was interesting, different, challenging, and even trying at times.

   Things that made the jobs interesting were changing jobs about every four weeks, then there wasn't a

slump in the jobs. Also, changing jobs gave you an idea of what each one in the office does and is responsible for. Each day seemed different and this way things weren't so boring and routine.

The challenging parts were some of the jobs. If you didn't really like a job, it was a challenge to begin with to try and do the best job possible, or at least it was for me.

The trying times were when we had to work extra hard to finish all the mail for that particular week. Sometimes the jobs were a little trying, but we always survived. Then, when some or one of the employees were absent, we always took on their job and were willing to do this even though it meant working extra.

I think it has helped our relationship between the other employees. Sometimes when someone had a lot of things to do and one of us were finished, we always helped each other. Also some of the employees held two jobs and didn't mind doing this. Maybe we weren't always willing to do our jobs but we did it anyway.

Some of the jobs I really like were filing and typing but the rest were important too. So, I think the Apex business was very good for us. I suppose if we had stayed with the books we would have just talked about what goes on in an office, but this way we actually did the things that help to keep an office going.

I suppose my challenge was doing a job I didn't really like and I guess I learned to do this, so if I learned to do this much it must have been good.

3. Student Number Three--I think that Apex was a very good project because it showed you all about how to work in a business. I liked all of the jobs that I held at Apex, but I really didn't care too much for Typist. But, really being the Typist has helped me to type much better. I guess the job I liked most was the Regional Clerk. I think that the jobs we have learned to do would help anyone who intends to get a job after their graduation and for the ones who may have to work and don't think they are going too.

The thing that I did not like about Apex this year was the fact that we didn't have enough employees and

everyone else had to either do two jobs, or had to do other things not pertaining their own job.

4. Student Number Four--I like Apex because it is interesting to learn all of the different types of jobs. The jobs I liked best were file clerk and machine operator. Working for Apex helps you to learn how to get along with other people in the office.

   There really isn't anything that I didn't like except the job of typist, but it grows on you. In other words, I liked working for Apex and think it was a great experience.

5. Student Number Five--I think this program is good because it teaches you what to expect on a real job and gives you the experience to get a job. In the jobs I have held, I have learned to file properly, to use machines effectively, to sort mail and to bill people who owe the company.

   Apex has helped me in my relationship with the employees of the company and has improved my outlook on life. It helped me realize that this world is going to be tough when I get out on my own.

   There is only one job I didn't care too much about and that was typist. I would rather have been machine operator or regional clerk because I like to work with machines and use my hands. The only thing wrong with this program was that we didn't have enough people to hold the jobs and we had to double up.

6. Student Number Six--I think this program is a good experience for you if you are going to get a job in an office. I especially liked the jobs of payroll clerk and regional clerk but at first I didn't like the job of typist. But after awhile, I got use to it and didn't really mind it. In fact, I became more accurate and learned to compose letters on my own.

VT 016 812
LAWRENCE, DOROTHY
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ABSTRACT - THIS PROJECT WAS DESIGNED TO EXPLORE THE FEASIBILITY AND PRACTICALITY OF IMPLEMENTING THE CONCEPTS OF: (1) A CORE CURRICULUM, (2) A CAREER LADDER FROM THE NURSE ASSISTANT (AIDE) LEVEL TO THE PRACTICAL NURSE LEVEL, AND (3) SELF-LEARNING PACKAGES AND A MULTI-MEDIA APPROACH TO EDUCATION FOR THE EDUCATIONALLY DISADVANTAGED. AFTER AN INITIAL PERIOD OF IMPLEMENTATION AN EVALUATION OF THE PROJECT WAS UNDERTAKEN. THE DATA COLLECTED REGARDING THIS EFFORT INDICATE THAT THE SPONSORING AND PARTICIPATING AGENCIES HAVE FOUND THESE CONCEPTS TO BE CONDUCTIVE TO HIGHER RATES OF SUCCESS FOR THEIR CLENTS THAN WERE POSSIBLE UNDER TRADITIONAL PROGRAMS. (JS)

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HEALTH OCCUPATIONS PROGRAM REPORT

October 1970 - June 1972

A Multi-Agency Pilot Project

Sponsored by
Arizona State Department of Education
Division of Vocational Education
Manpower Development Training Act Project AZ (4) 0046
Work Incentive Program

Participating Agencies
Division of Vocational Rehabilitation
Service, Employment, Redevelopment
Bureau of Indian Affairs

Approved by
Arizona State Board of Nursing

by Dorothy Lawrence, R.N., M.A.
Project Director

Tucson, Arizona
June 30, 1972

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PREFACE

This report covers the Project from inception until present. The Health Occupations Program was a collaborative, cooperative effort which was inspired by Mrs. Shirley Mannion, State Supervisor, Health Occupations, Arizona State Department of Education, Division of Vocational Education.

Agencies which initially funded the Program in an effort to enhance the success of their clients into successful performance of jobs in the health field are listed on the front cover, as sponsoring agencies. Agencies which later joined the effort by enrolling clients on a buy-in-basis are those listed on the front cover as participating agencies.

The Program was approved by the State Department of Education, Division of Vocational Education and the Arizona State Board of Nursing to explore the feasibility and practicality of implementing the concepts of a core curriculum, career ladder from nurse assistant (aide) level to practical nurse level, unitized self-learning packages and a multi-media approach to education with a unique population--disadvantaged adults with a minimum of eighth grade (8th) reading, writing and mathematics functional ability. The goal of the Project was to determine if implementation of these concepts with agency supportive services would enhance success with this student population.

The data to date indicate that the sponsoring and participating agencies have found the concepts employed in the Project to be conducive to higher rates of success for their clients than were possible under traditional programs.

Analysis of this Program is complicated by the fact that there exist such a large number of variables. However, the data indicates a high degree of success with a student population which would not have had the opportunity to obtain preparation, nor would their chances of success have been as possible in a traditional program.

The comments presented in this report are representative of the analysis and evaluation of the data by the author, and not of any of the agencies, per se.

ACKNOWLEDGEMENTS

Large numbers of persons have given of their time and energies to plan, implement and evaluate this Program. The health service agencies, sponsoring and participating agencies, students, faculty and secretarial personnel cooperated to support the goals.

Special mention is hereby given to:

State Department of Education
- Division of Vocational Education.....Mr. J. R. Cullison
- Manpower Development Training Program.Mr. John Dutton
- Special Needs Program (W.I.N.).....Mr. Stewart Miller

Arizona State Employment Services.....Mr. Charles A. Boyle
- Employment Opportunity Center.....Mr. Kenneth Kinkade
- Work Incentive Program.....Mrs. Arlene Stevenson
- Division of Vocational Rehabilitation.Mr. Charles Orvis

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- Director, Occupation Education.....Mr. Louis Bazetta

Tucson Public Schools Skill Center Administration
- Director.....Mr. Bob Kessler
- Assistant Director.....Mr. Ed Acuna
- Project Director.....Mrs. Dorothy Lawrence.

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H.O.P. Faculty

Mrs. Louise Adams	Mrs. Emelia Lewis
Mrs. Nancy Bowers	Mrs. Susan Margolis
Mrs. Virginia Caldwell	Mrs. Dorothy Moore
Miss Audrey Englestad	Mrs. Carol Orin
Mrs. Ellen Isaak	Mrs. Judi Watts
Mrs. Susan Kane	

My sincere thanks to each and all of the many who played vital roles in the lives of the students and to the development of this data, particularly Eleanor Markert, Research Dept., T.P.S.

Dorothy Lawrence,
Project Director

PART I

CHAPTER I

INTRODUCTION & BACKGROUND

This Health Occupations Program Report was concerned with data and information obtained directly from the Program staff, students, graduates, health agencies which offered clinical facilities to the students and employment to the graduates, sponsoring agencies, participating agencies, and evaluation services of the Arizona State Board of Nursing and National League for Nursing. The study is conceived to be a comprehensive exploration of an innovative attempt to increase the effectiveness of health occupations education in the State of Arizona.

Present practices of health occupations education result from a culmination of earlier actions and events occurred under different sets of circumstances, the validity of which needs exploration. Further developments will be guided by impressions and judgements based, at best, on available data. The primary purpose of this study is to develop current data to serve as a basis for sound judgements in planning future developments in preparation of health occupational personnel at the job entry assistant and practical nursing levels. Adaptation and utilization of the data and findings for implementing change in health occupations education programs will be the responsibility of competent leaders and administrators in the State of Arizona.

The general hypothesis of this study was that by employing educational innovations you can enhance student success rates. Hypothesis #2 was that students who do not meet traditional selection criteria may be successful health occupational personnel if given a real opportunity to succeed. Hypothesis #3 was that many persons who achieve success at the assistant level would continue to the next level if given a real opportunity. Hypothesis #4 was that increased numbers of qualified persons will be retained in the health field if there is a good opportunity for mobility within the field. Hypothesis #5 was that demonstrated performance is a better predictor of success on the State Board Licensure Exam for practical nursing than length of program. Data from the testing of these hypotheses should serve to improve the quality and quantity of available health occupational personnel at the assistant and practical nursing levels.

To test these hypotheses the student population was identified as one which would not have met the criteria for other practical nursing programs in the State of Arizona. Success was measured by

Arizona State Board of Nursing Examination for licensure as well as demonstrated successful performance on the job.

The research design for this descriptive research included exploration of relationships which would affect the student's opportunity for success. The statistical technique of correlational coefficients was utilized.

Appendix A presents an Outline of the Data Collection Plan which gives a general time schedule and list of the instruments utilized. Descriptions will be included in the chapters where results are presented.

PART I

CHAPTER II

RELATED RESEARCH

Variables

Education In the report, Background, Characteristics and Success of Practical Nursing Applicants, Students and Graduates, Tomlinson, Langdon, Huck and Hindhede, found a significant relationship between the amount of education and completion of a practical nursing program. They found a 53.8% P.N. program completion of students with less then 12th grade.

Age The Tomlinson group found the highest drop-out rate in two age groups, 35-39, and 50-54. The mean age of students in the P.N. programs used in their study was 27. Tomlinson, Langdon, Huck and Hindhede found a correlation of .10 between age and State Board Licensure Examination scores.

G.A.T.B. The mean scores on the G.A.T.B.-General for the P.N. graduates was 103.2. All students admitted through the State Employment Service on the basis of their G.A.T.B. scores exceeded the norm as established by the State Employment Service; approximately one-fourth of the students failed to complete the Program. This is the same percentage of dropouts this group found for the entire enrolled student population. In summary regarding the G.A.T.B., this group felt there is some relationship between the scores on the G.A.T.B. and completion of the Program, however, they felt other factors may be more important than the scores on the G.A.T.B.

Dependents The data reflects that 42% of the dropouts had children at home and approximately 50% had dependents.

Race The dropout rate for the nonwhite group was significantly higher than for the white group. The dropout rate for nonwhite students was 45.5%.

N.L.N. This research indicates correlations between S.B.L. scores and the N.L.N. (N.I.P. and T.U.C.) ranged from .47 through .74.

State Board Licensure S.B.L. Exam. This population excelled the national mean of 500 with a mean of 530 and a standard deviation of 85.2. Tomlinson, et al, found a correlation between the S.B.L. and the G.A.T.B.-General to be .10. It was interesting that 11.5% of the M.D.T.A. students scored 399 or below. At the other extreme 11.5% scored 650 or above. Graduates of the M.D.T.A. schools showed a wider range of scores than any other group.

Variables

Faculty — Relatively low relationship between the faculty evaluations and the standardized test evaluations of achievement in practical nursing.

Standardized Tests — Each of their standardized selection instruments and the high school achievement scores had statistically significant correlations with P.N. in-school achievement measures and the State Board License results. However, these correlations were generally in similar range and no one instrument was found to be a significantly better predictor of in-school achievement or State Board Examination scores than the others.

High School Achievement — In An Investigation of the Vocational Behavior of Selected Women Vocational Education Students, L. J. Bailey found that students' grade point average in high school was significantly correlated with P.N. classroom achievement and State Board achievement.

Ability, Achievement measures — L. J. Bailey also found that State Board scores were significantly correlated with all ability and achievement measures, except patient relationship rank. In general, the data indicate positive significant relationships among all of the cognitive type of measures. However, the data suggest that variables other than those utilized in this study were associated with clinical achievement and patient relationship rank.

Age — In a study entitled, Job Satisfaction in Practical Nursing as a Function of Measured and Expressed Interests, G. H. Martin found the mean age of the P.N. group to be 25.3. He further found practical nursing students to be an unique population who have tended to postpone their education (not receive vocational training immediately after high school).

Education — In a Review of studies in Illinois and Iowa it was found that all programs required at least a tenth grade education or its equivalency; 42% required high school completion or its equivalency.

G.A.T.B. — In a study entitled, "The 'G' Factor of the General Aptitude Test Battery as a Predictor of Success in the National Test Pool Examination for Practical Nurses" done by Mary Ruth Ubbink, R.N. January 1970, a coefficient of correlation for the "G" factor of the General Aptitude Test Battery and the National Test Pool Examination was .448. Miss Ubbink stated that this moderate correlation would indicate the G.A.T.B. should be continued as a predictor of success on the S.B.L. Examination until a better predictor of success is found.

Variables

Miss Ubbink recommended further study on the language factor as to its bearing on achievement in the G.A.T.B. as well as the S.B.L. Examination.

Miss Ubbink found the following correlation of the "G" score of the G.A.T.B. and other standardized ability and intelligence tests:

Differential Aptitude	.78
American Council on Education	.72
Otis	.76
Wechster-Bellvue	.68
California Test of Mental Maturity	.81
Army General Classification Test	.70
Miller Analogy	.53

S.B.L. Exam. In a Survey done by Mary Ruth Ubbink, R.N., Phoenix Union High School P.N. program entitled "Survey of Factors Affecting the Scale of State Board Achievement (National Test Pool)", Mrs. Ubbink reported the following data:

Age The younger students do not do as well as the older students. It was felt by the author that this reflected the younger student's lack of maturity, life experience and motivation.

Race Miss Ubbink referred to the many authorities on testing that our general education tests are geared for the middle and high, socio-economic class, caucasian race. In her survey she found only those of caucasian race received scores of 650 and above, and as far as could be determined these students were also of middle socio-economic group.

98% of the failure-scoring graduates were non-white,which the author felt was a reflection of the fact that national tests are usually geared to a certain group, which does not adequately consider the language and cultural factors of the non-white population.

Prior Educ. Miss Ubbink interpreted the survey data to indicate that the high education the student achieved, the greater chance for success.

81% of the student who failed the S.B.L. Examination were high school graduates. The balance were less than high school but more than 8th grade education. It was believed that age (immaturity) of the students affected this score inasmuch as the majority of the students were in the under 25 years of age group.

Variables

Aptitude Score

All failing students received a score below 89 on the G.A.T.B.- General factor. Miss Ubbink felt this would indicate using a score of 90 for a selection criteria.

N.L.N.

Miss Ubbink felt the N.L.N. tests seem to be an excellent predicter of success on the S.B.L. Examination inasmuch as all the students achieving high above the national average (55 percentile) also achieved excellent scores on the State Board Licensure Examination. Conversely, Miss Ubbink found all S.B.L. Examination failing students received far below the national average on the N.L.N.

Faculty Assessment

The faculty, according to Miss Ubbink, should be able to predict with reasonable accuracy if, and who the failures in a class will be.

Miss Ubbink further states a low score in one area (eg. aptitude) will not always determine a S.B.L. Examination failure, because there are too many variables to be considered. Yet, she states that if several variable scores are low, the student will, with reasonable certainty fail the S.B.L. Examination.

PART I

CHAPTER III

HEALTH OCCUPATIONS PROGRAM FACTS AND FINDINGS

HEALTH OCCUPATIONS PROGRAM POPULATION

The total population for this Program consisted primarily of adults classified as disadvantaged* and who met miscellaneous criteria of the specific referring agency.

The following table indicates the total number of students enrolled during the period from October 1970 - April 1972.

Referring Agency	Acronyms	No. of Students
Division of Vocational Rehabilitation	(D.V.R.)	37
Service, Employment, Redevelopment	(S.E.R.)	10
Bureau of Indian Affairs	(B.I.A.)	5
Independent Students		36
Manpower Development Training Act	(M.D.T.A.)	57
Work Incentive Program	(W.I.N.)	144
		289

As of April, 1972, 91 students were currently enrolled, leaving 198 potential graduates. 172 (90%) of the potential graduates had successfully completed the Program in some health occupation.

Graduates Job Preparation of	Acronyms	No. of Students
1a. Nurse Assistant (Aide)	(N.A.)	157**
2. Ward (Unit) Clerk	(W.C.)	9
3. Physical Therapy Aide	(P.T.A.)	6
		172
1b.**Practical Nurse	(P.N.)	
Out of the 157 students who completed at the N.A. level had also been successful at P.N. level.		52

Out of the 52 who had successfully completed at the nurse assistant level, forty-seven (47) students had taken the Arizona State Board Examination for licensure as a practical nurse.

The practical nurse population will be the basis for this Report. Little data is available on the assistant level. Due to time and personnel limitations of this Program, compilation of data on the assistant level group is not complete. However, this does not denounce the necessity of further research at this level.

*See Appendix B for definition of disadvantaged.
Appendix C for student selection criteria.
Appendix D for student population description.

CORRELATIONS BETWEEN SELECTED FACTORS OF ABILITY AND ACHIEVEMENT OF PRACTICAL NURSING GRADUATES

Data utilized in the analyses included in this Chapter were drawn from 1) standardized instruments for measuring ability, aptitude and achievement, 2) questionnaires completed by students during the Program and after completion of the Program, 3) rating scales completed by the faculty, 4) evaluation of on-the-job performance of graduates after completion of the Program which were completed by the employing health agencies, and end of Program achievement as measured by the State Board Licensure Examination. Selected personal and family characteristics are included.

Product-moment correlation statistics, Pearson-r, were used to determine the relationships among many of the variables. The degree of relationships between two variables or measures is determined by the correlation coefficient, an index which may vary from 1.00 to -1.00. A correlation of 1.00 would indicate that the person with the highest score on one measure also had the highest score on the other measure with which it is being correlated, and that each of the persons who took both of the tests (or had a score on each measure) achieved the same rank in each group, that is, perfect correlation. By knowing the score on one measure, you could predict accurately the score the person would achieve on the other measure. A correlation of -1.00 is a perfect negative correlation, in which the highest of a group on one measure is the lowest of the group on the other measure, and all persons who took both tests are in exactly reverse order on the two measures. When no relationship exists at all, the correlation is 0.00 or, by chance of small magnitude, either positive or negative. This means that a person scoring high on one measure is just as likely to be high, medium or low on the other measure. If high, and significant, relationship could be found between selection instruments and success in practical nursing programs, then the selection process could be improved.

Several factors may operate to reduce the size of the correlation coefficient. Included are: a restricted range of scores, individual factors or conditions affecting the person taking the test, poor reliability of the test instruments, errors in the scoring procedure, etc.

ABILITY AND APTITUDE MEASURES

General Aptitude Test Battery (G.A.T.B.)

The G.A.T.B. has been developed and standardized by the U. S. Employment Service and utilized by the State Employment Services for counseling, occupational placement and as a basis for recommendation to M.D.T.A. training programs. Included in the G.A.T.B. are twelve

sub-tests which yield individual scores; combinations of the individual sub-tests are used to determine additional measures. Standardization and validation of various combinations of the sub-tests have been developed by the U. S. Employment Service for various occupations.

Two scores from the G.A.T.B. are reported in this Study. The G - Intelligence factor indicates general learning ability--the ability to reason and make judgments. Closely related to doing well in school. The V - Verbal Aptitude factor--the ability to understand meaning of words and to use them.

Health Occupations Program
Practical Nurse Graduates
G.A.T.B. Scores

	General	Verbal
N=47		
Mean	100.49	102.30
S. D.	13.62	13.36

The mean for the practical nursing group of students was above the acceptable minimums as indicated by the above data. However, 13 students (28% of the total population) scored less than the commonly accepted score of 90. It should be noted that out of these 13 students, 9 (69% of the 13), were successful on the State Board Licensure (S.B.L.) Examination. These 13 students would not have been given the opportunity to succeed in most traditional programs. This data would tend to support Hypothesis #2 that students who do not meet traditional selection criteria may be successful health occupational personnel.

Arizona State Board of Nursing
Practical Nurse Licensure Examination
Correlations with G.A.T.B.

Factors	Pearson-r	Significance
General	.50	P<.01*
Verbal	.56	P<.01

*The probability statement, or level of significance, indicates that there is only 1 chance in 100 that this was a chance relationship.

This data would indicate that there is a significant correlation between the General and Verbal G.A.T.B. factors and the State Board Licensure Examination.

The author suggests that the G.A.T.B., General and Verbal factors, are a valuable tool to provide a standardized measurement of aptitude. However, it should be considered as only one of many variables which may require adjustments on the part of the student in order to find success in practical nursing.

Adult Basic Learning Examination (A.B.L.E.)

Since eighth grade functional reading, vocabulary and mathematics was approved for this pilot Project, the Adult Basic Learning Examination, Level II, Form B, was the instrument used to determine these levels.

The reading section of the A.B.L.E. determines how well the student can understand the meanings of sentences and paragraphs which he reads. The reading test establishes the functional reading level of adults from grade 5 - 9.

The vocabulary test contains 50 items to asses vocabulary independent of reading ability. In addition to an evaluation of how well the student understands words, it gives an indication of how well the student will be able to grasp verbal, school-type material.

In order to obtain valid measurement of the student's arithmetic ability, the A.B.L.E. includes both an arithmetic computation part and an arithmetic problem solving part. The two are administered and scored separately, but the raw scores may be combined into one for a total arithmetic score. The entire arithmetic test determines the overall arithmetic achievement of each student. It gives an indication of relative strength in the two areas sampled in the two subtests. The test can, of course, be used to determine placement in an arithmetic program.

Data on the validity and reliability of the A.B.L.E. was obtained by Drs. Karlsen, Madden and Gardner with three groups -- (1) school group of 1,000 pupils from 4 states, (2) 2,500 inmates of state penal institutions of North Carolina, (3) 800 Job Corp personnel, and (4) 450 adults enrolled in basic education courses.

Health Occupations Program
Practical Nurse Graduates
A.B.L.E. Scores

	Vocabulary*	Reading*	Math*
N=47			
Mean	8.91	8.90	7.42
S.D.	.60	.44	1.28

*It should be noted that the mean is affected by the limited range of the test 9.0+ being the highest score possible. However, this test was selected to identify students with less than eighth grade functional ability.

Two students (4%) of the total practical nursing population were below the eighth grade level on vocabulary and reading. These students did not pass the State Board Licensing Examination. Since neither student with less than eighth grade functional vocabulary and reading

skills passed the S.B.L. examination, it would appear expedient that this deficit be brought up before admission into further practical nursing programs.

29 students (62%) of the total practical nursing population were below the eighth grade level on the mathematics section of the A.B.L.E. Remedial mathematics was taught as a supportive service during the Program in view of this gross deficiency.

It should be noted that the Arizona State Board of Nursing waivered its requirement of tenth grade educational requirement for this pilot Project.

Arizona State Board of Nursing
Practical Nurse Licensure Examination
Correlations with A.B.L.E.

Factors	Pearson-r	Significance
Reading	.50	P<.01
Vocabulary	.43	P<.01
Mathematics	.55	P<.01

This data indicates a correlation between the S.B.L. Examination and the A.B.L.E. Examination, significant at the 1% level of confidence.

The A.B.L.E. in the author's opinion has demonstrated significance as a tool to determine eighth grade functional vocabulary, reading and math ability of a disadvantaged adult population.

This data supports Hypothesis #2 inasmuch as students with less than the traditional 10-12 grade selection criteria of functional reading, vocabulary and math ability can be successful on the S.B.L. Examination.

ACHIEVEMENT MEASURES

National League for Nursing Examination - N.I.P.

This standardized achievement test was the N.L.N., practical Nursing Achievement Test, N.I.P., Form 864, Nursing Including Aspects of Pharmacology. This 150 - item test includes questions on Medical-Surgical Nursing, Maternal-Child Nursing, Pharmacology, the Administration of Medications and Vocational Adjustment. This test was administered toward the end of the students' Program.

N.L.N. -- N.I.P.
Correlations with Selected Factors

Factor	Correlation	Significance
Faculty's Subjective Evaluation of Knowledge	.77	P<.01
State Board Licensure Examination	.74	P<.01

National League for Nursing Examination - T.U.C.

The National League for Nursing, Practical Nursing Achievement Test, T.U.C., three units of content, Form 754, has been developed by the National League for Nursing and standardized on prior practical nursing groups. This 148-question test provides a total score and 3 sub-scores. Body structure and function, basic nursing procedures, nutrition and diet therapy are covered. The test was administered as intended late in the students' Program.

N.L.N. -- T.U.C.
Correlations with Selected Factors

Factor	Correlation	Significance
Faculty's Subjective Evaluation of Knowledge	.73	P<.01
S.B.L. Examination	.81	P<.01

FACULTY'S SUBJECTIVE EVALUATION

Prior to receiving any data other than that from their faculty - student relationship, the faculty, as a group, assigned a quantitative score to students on three factors: knowledge, skill, attitudes.

Faculty's Subjective Evaluation of Practical Nurse Students

	Factor	Correlation	Significance
Re Knowledge	G.A.T.B.-General	.60	P<.01
	Verbal	.66	P<.01
	A.B.L.E.-Arith.	.54	P<.01
	N.L.N.		
	T.U.C.	.73	P<.01
	Psych	.66	P<.01
	N.I.P.	.77	P<.01
	S.B.L. Exam.	.78	P<.01

Faculty's Subjective Evaluation
of Practical Nurse Students

	Factor	Correlation	Significance
Re Skills	G.A.T.B.-General.	.38	P<.01
	Verbal	.48	P<.01
	A.B.L.E.-Voc.	.48	P<.01
	Read.	.38	P<.01
	Arith.	.31	P<.05
	S.B.L. Exam.	.66	P<.01
Re Attitude	S.B.L. Exam.	.31	P<.05

It is significant to note the variance of correlation between these three factors in relationship to success on predominately paper-pencil forms of assessment. (See Job Performance)

The Health Occupations Program faculty received intensive orientation to the total Program, including philosophy, objectives, learning theories and techniques for teaching the disadvantaged. It is believed by the author that these correlations are higher than would be found without this inservice education.

PERSONAL CHARACTERISTICS OF PRACTICAL NURSING POPULATION

Variables

Race 62% of the students were classified as white; 38% were classified as a minority racial group member.

Minority Membership Correlated with Selected Factors

Factor	Correlation	Significance
A.B.L.E.-Arith.	-.53	P<.01
Bilinguality	.87*	P<.01
Faculty's Subjective Assessment		
of Knowledge	-.50	P<.01
of Skills	-.27	P<.05
of Attitude	-.18	non-significant
National League for Nursing		
Three Units of		
Content	-.41	P<.01
Psychology	-.56	P<.01
Nursing Incl. Pharm.	-.58	P<.01
Arizona State Board of Nursing		
Licensure Exam.	-.64	P<.01

The above data reflects the fact that the Mexican-American student was the predominant minority member. It is felt that all of the above correlations probably reflect the fact that English is a second language to the majority of our minority population. Being bilingual, tests written in the English language are often misinterpreted.

It is a known fact that some of the Mexican-American students who had extreme difficulty with paper-pencil tests are performing satisfactorily on the job.

It should be noted the extreme variance of correlation between the faculty's subjective evaluation of student's knowledge (negative -.50), of student's skills (-.27) and of attitude (-.18). Our Program has classroom objectives which measure theoretical knowledge with paper-pencil tests. Skills are assessed in the clinical area where knowledge must be applied to perform skills effectively.

It is believed that this data reflects that paper-pencil tests may not be a valid measure for the minority members, particularly the bilingual. These findings would reflect a need for further research in this area.

Language 32% of the total student population were bilingual (English was a second language).

Variables

Bilinguality Correlated with Selected Factors

Factor	Correlation	Significance
G.A.T.B.--General	-.31	P<.05
G.A.T.B.--Verbal	-.33	P<.05
A.B.L.E.--Arith.	-.49	P<.01
Faculty's Subjective Assessment		
of Knowledge	-.52	P<.01
of Skills	-.24	Non-significant
of Attitude	-.17	Non-significant
N.L.N.		
Three Units of Content	-.38	P<.05
Psychology	-.60	P<.01
Nursing Incl. Pharm.	-.56	P<.01
Arizona State Board of Nursing	-.58	P<.01

The above data appears to reflect a consistent difficulty of the bilingual student on paper-pencil type assessment.

(See section on Job Performance).

It is believed that the above data would substantiate a need for questioning the validity of paper-pencil tests for the bilingual student.

A common argument is that the bilingual student must read current literature and charts in English, therefore there is no need to change our present system.

The author recommends the possibility of special classes on test-taking techniques, emphasizing the meaning of commonly used English words in the test construction process.

It is further recommended that further research be done in determining success factors of bilingual graduates on the job.

Age

Age in years was one variable of the inter-correlations. The population was all adult with an age range from 20 - 58, with a mean of 29.17, and a standard deviation of 8.21. There was little correlation between age and most of the factors under consideration. The correlation between age and State Board of Nursing Scores was a Pearson-r of .01 which is not significant. A correlation of .29 which is significant at the .05 was found between age and attitude as assessed subjectively by the faculty. (P<.05)

Variables

Highest Grade Completed In School

The highest grade completed in school by the practical nursing Program students ranged from sixth (6th) grade to fifteenth (15th), with a mean of 11.02, and a standard deviation of 1.86.

No significant correlations were found between the highest grade completed in school and other factors under consideration. A lack of correlation, a Pearson-r of .01 was found between highest grade completed in school and the State Board of Nursing Licensure Examination.

Heads of Household

Thirty-three students (70%) of the practical nursing Program qualified as heads of household which meant they must meet the responsibilities of maintaining a home and most often children while also fulfilling the role of a student practical nurse.

No significant correlations were found between being the head of a household and any of the other factors under consideration. A total lack of correlation, a Pearson-r of .00 was found between heads of household and the State Board of Nursing Licensure Examination.

Having Dependents

The students averaged 2.0 dependents apiece, or a total of 94 dependents. ($P<.01$) A Pearson-r of .45 was found between having dependents and being heads of household, which might be expected. A Pearson-r of .35 was found between having dependents and the highest grade of school completed. ($P<.05$)

However, a lack of correlation, a Pearson-r of -.01 correlation was found between having dependents and the State Board of Nursing Licensure Examination.

SUCCESS AS MEASURED BY THE ARIZONA STATE BOARD LICENSURE EXAM

The Arizona State Board of Nursing administers a standardized test to eligible individuals as one of the requirements for issuing a license to practice practical nursing. Arizona, like 47 other of the 50 states purchases a test from the National League for Nursing, Evaluation Service. The scores on the Examination are reported as standardized scores with a mean of 500 and a standard deviation of 100. Arizona uses 350 as its minimum score for licensure.

The mean standard score for all Health Occupations Program graduates taking this Examination was 491.77 with a standard deviation of 109.57.

Out of the 47 students taking the Examination, 85% passed. 11% of the students scored between 300 and 350. It is believed that they will succeed on retakes. 4% made scores below 300. These 4% are the two students who did not have 8th grade functional reading and math scores prior to entrance into the Program.*

State Board Licensure Exam
Correlations with Selected Variables

Factor	Correlation	Significance
G.A.T.B.-General	.50	P<.01
G.A.T.B.-Verbal	.56	P<.01
A.B.L.E.-Vocabulary	.43	P<.01
A.B.L.E.-Reading	.50	P<.01
A.B.L.E.-Math	.55	P<.01
N.L.N.-T.U.C.	.81	P<.01
N.L.N.-Psych	.74	P<.01
N.L.N.-N.I.P.	.74	P<.01
Bilingual	-.58	P<.01
Faculty's Subjective Evaluation of		
Knowledge	.78	P<.01
Skills	.66	P<.01
Attitude	.31	P<.05
Highest Grade Completed	.01	Non-significant
Heads of Household*	.00	Non-significant
Having Dependents*	-.01	Non-significant
Age	.01	Non-significant

This population was probably unique in the numbers of women who were heads of households with dependents. It is significant that there appears to be no significant correlation between highest grade completed, age, being the head of a household, or having dependents.

*See Appendix E & F.

SUCCESS AS MEASURED BY JOB PERFORMANCE

A volunteer committee representing local health service agencies collaboratively designed a form by pooling the items for which they are currently evaluating personnel in their own health agency. (See Appendix Q

Returns are in on 38 of the 47 students covering 3-6 months evaluations of on-the-job performance. The following Pearson-r correlatio were run on this set of 38 students on the following factors:

Job Performance Correlations with Selected Variables

Factor	Correlation	Significance
GATB-General	-.15	nonsignificant
GATB-Verbal	-.26	nonsignificant
ABLE-Vocabulary	.24	nonsignificant
ABLE-Reading	-.09	nonsignificant
ABLE-Arithmetic	-.12	nonsignificant
Race	-.07	nonsignificant
Bilingual	-.03	nonsignificant
Instructor		
Knowledge	.03	nonsignificant
Skill	.18	nonsignificant
Attitude	.14	nonsignificant
N.L.N.		
T.U.C.	-.03	nonsignificant
Psych	-.06	nonsignificant
N.I.P.	-.03	nonsignificant
S.B.L. Exam	.12	nonsignificant
Age	.07	nonsignificant
Highest Grade	.08	nonsignificant
Heads of Household	.05	nonsignificant
Dependents	.20	nonsignificant

Those findings appear to be significant inasmuch as they are not at all consistent with the other data presented thus far. No significant correlations were found with Job Performance.

Design for Evaluation of On-the-Job Performance

The basis for quantifying the results of the evaluations returned by the employing health facility for graduate follow-up was by using the evaluation form designed by a committee of health facility personnel. Scores were obtained by giving a relative weight to each check mark according to the following chart. (For description of factors-See Appendix Q)

Factor	Quantitative Value of Check Marks on Evaluation Form			
I. Job Knowledge	12.5	7.2	4.2	0
II. Quality of Work	12.5	7.2	4.2	0
III. Quantity of Work	12.5	7.2	4.2	0
IV. Initiative	12.5	7.2	4.2	0
V. Cooperation/Attitude	12.5	7.2	4.2	0
VI. Patient Relationship	12.5	7.2	4.2	0
VII. Dependability	12.5/0*	12.5/0*	12.5/0*	12.5/0*
VIII. Appearance	12.5/0*	12.5/0*	12.5/0*	12.5/0*
Sample range of scores if students received checks in specified columns.	68.2-100	43.2-68.2	25-50.2	0-25

*If satisfactory on Dependability and/or Appearance, each factor was worth 12.5. If unsatisfactory on one or both, 0 for each

Rating Scale-Job Performance	
0-25	Inadequate
26-50	Low-Average
51-68.2	Average-Above average
68.2-100	Excellent

The class mean for the returns to date has been 68.6 with a S.D. of 12.42, would indicate graduates are performing successfully on the job.

It is interesting to note that only one factor considered vital to the employers--Job Knowledge--is a direct assessment of primarily cognitive ability. The other measures reflect skills and attitudes as well, for which few tools of measurement have been designed or validated for the practical nurse. This would reemphasize measurement by performance objectives which include cognitive, psycho-motor, and attitudinal factors.

Part One
SUMMARY

The following commentary will compare Project findings with related research as presented in Part One, Chapter II.

GATB

The Ubbink Study found all S.B.L. Exam failing students received a score below 89 on the GATB.

The Project results in contrast showed 69% of the students who scored below 90 on the GATB were successful on the S.B.L. Exam.

Miss Ubbink did suggest a need for further study on the bearing of the language factor on achievement on the GATB, which was also indicated in the Project Study.

Ubbink, Tomlinson, Martin, et.al. along with this Project, found a correlation between the GATB and S.B.L. Exam, as well as other cognitive type measures.

Even though nonsignificant, the inverse correlation between the GATB-General, as well as the GATB-Verbal and Job Performance would bring up a question which was raised in the Tomlinson Study.

The question would be identification of the purpose of evaluation of ability and achievement. Is it toward the goal of passing the S.B.L., which is required in order to practice as a P.N.? Or is our goal the evaluation of knowledge, skills, and attitudes which will predict the ability to perform safely and effectively in the role of a practical nurse?

ABLE

The significant correlations between the ABLE and the S.B.L. Exam would indicate that it was a fairly good predictor of success with this population.

However, the positive correlation, though nonsignificant, between job performance and ABLE (Voc.), seems to indicate that vocabulary might be essential to the performance of a practical nurse. The negative corelations, though nonsignificant, between reading and job performance, would raise a question as to the amount and kind of reading necessary to perform safely and effectively as a practical nurse.

N.L.N.

Tomlinson and group found significant corelations between the N.L.N. Examinations and the S.B.L. Exam, which was repeated in this Study.

This was consistent with the finding of Ubbink who found students who scored very high on the N.L.N. also scored very high on the S.B.L. Exam. Conversely, students who scored very low on one, scored very low on the other.

No significant relationships, however, were found between N.L.N. scores and job performance in the Project findings.

This data, like the ABLE and GATB, raises questions as to the correlations of N.L.N. and job performance. Further study should be done on the relationships between each of these factors and job performance.

Faculty Evaluations

According to Ubbink, . the faculty should be able to predict with reasonable accuracy if, and who, the failures in a class on S.B.L. Exam, will be.

In concurrence with the above, the faculty's evaluation of knowledge, skills, and attitudes had a positive correlation with S.B.L. Exam scores, as well as GATB (General and Verbal), ABLE (Arithmetic), and N.L.N. (T.U.C., Psych, N.I.P.).

Little correlation was found, however, between the faculty's evaluation and job performance as reported to date.

Race

Tomlinson and group found the highest dropout rate among the non-white (45.5%).

Ubbink found only those of Caucasian race received scores of 650 and above. She also reports 98% of the failure-scoring graduates were non-white, which she felt was a reflection that national tests are usually geared to a certain group, which does not adequately consider the language and cultural factors of the non-white population.

In concurrence with their findings, the non-white students' scores on all of the cognitive-type measures used in this Project, had significant inverse correlations.

It is interesting to note that a significant correlation was not found between race and job performance.

Language

The bilingual factor tended to portray the same pattern as the race inasmuch as most of our non-white students were Mexican-Americans, with English as a second language.

Strong inverse correlations were found between the bilingual student and cognitive measures.

However, no significant correlations were found between being bilingual and successful performance on the job.

Highest Grade Completed

Tomlinson and group found 53.8% completion rate among students with less than 12th grade education. They report a significant correlation between the amount of education and completion of the program.

L.J. Bailey found that students' grade point average in high school was significantly correlated with P.N. classroom achievement and State Board achievement.

L.J. Bailey also found State Board scores were significantly corelated with all ability and achievement measures, except patient relationship rank.

In a review of studies, all programs in Illinois and Iowa required at least a tenth grade education or its equivalency; 42% required high school completion or its equivalency.

Concurrently, Ubbink found the higher the education the student achieved, the greater chance for success.

In contrast, in this Study, no significant correlations were found between the highest grade completed and any other factors under consideration. The author suggests that with this unique population, with the highest grade completed in school ranging from 6th grade to 15th grade, with a mean of 11.02, the students demonstrated the expressed fact that they saw this program as a real opportunity which they had never had before.

It is believed these findings reflect the facts that the students applied themselves conscientiously to their task and that the program was designed to meet their educational needs.

Heads of Household with Dependents

In the Tomlinson group study, they found 42% of the dropouts had children at home and 50% had dependents.

It is interesting to note that in the Project no correlations were found between this factor and any of the other measures.

Number of Variables Related to Success

In Appendix F, the students were ranked from 1-47 in order of their scores on the S.B.L. Exam from high to low.

The number of characteristics (variables) which would require adjustments on the part of the student in order to succeed were plotted.

The following chart shows the average number of variables per student in relationship to S.B.L. scores.

Student S.B.L. Exam Scores		Average No. of Variables per Student
	600+	.8
	500+	2.0
Passing	400+	3.2
Failing	300-350	4.6
	200	7.5

This data would indicate a need to reduce the factors which would require adjustments to a minimum prior to admission into a practical nursing program. (For example, bring up reading deficiencies prior to program admission.)

It should be further noted that some of the characteristics (e.g. race cannot be changed. If there is no correlation between race and job performance, perhaps we need to take a closer look at our assessment procedure.

Part One
CONCLUSIONS and RECOMMENDATIONS

Hypothesis #1 was that by employing educational innovations, success rates can be increased.

Success for the total program was measured by completion of program with a salable skill. With this as the criteria, the program reports a 90% success rate with a population which across the nation reports 50-70% completion as successful. (See Part I, page 7).

In relationship to the practical nursing program, using the State Board Licensure exam as one criteria for success, the program reports 85% successful completion. 55% of the students scored above the national average score of 500.

These findings would tend to support this hypothesis.

Hypothesis #2 was that students who do not meet traditional selection criteria may be successful health occupational personnel if given a real opportunity to succeed.

The student characteristics, presented in Appendix D, indicate that 28% of the students were below 90 on the GATB (General), 13% were below 85 of the GATB (General), 62% were below 8th grade functional math, 4% were below 8th grade functional vocabulary, and 4% were below 8th grade functional reading. The population was almost entirely disadvantaged, with a mean of 11th grade school completion and a range from 6th through 15th grades.

Although a large portion of this population would not have found entrance into most traditional programs, their success rates compared favorably to traditional programs.

This data would tend to support Hypothesis #2.

Hypothesis #3 was that many persons who achieve success at the assistant level would continue to the next level if given a real opportunity.

At the time of this report, 52 students (18%) of the total enrollment had already completed at the practical nursing level. Approximately 60 additional students will be completing within the next few months which will raise the percentage to approximately 38% of students who have continued or will continue in the immediate future from the nurse assistant to practical nursing level .

It should be noted here that a large number of students have stopped to work as a nurse assistant prior to continuing to the practical nursing level. They plan to either gain additional experience and/or further basic education. However, they did express the fact that they plan to continue at some point in the future. Our experience with these students tends to confirm the hypothesis although it would take a longitudinal-type study to statistically follow their behavior to determine its significance.

Hypothesis #4 is that increased numbers of qualified persons will be retained in the health field if there is a good opportunity for mobility within the field.

Accurate data was not accumulated to test this hypothesis, inasmuch as no records were kept to record the numbers of times nor the direction of change of goals from time of entrance until completion of the program.

The author suggests this is an area for further exploration. However, it should be noted that the faculty verbally reported many changes of student's goals during the program.

Hypothesis #5 was that demonstrated performance is a better predictor of success on the State Board Licensure Exam for practical nursing than length of program.

Demonstrated performance was measured by meeting classroom and clinical performance objectives which were written and revised by faculty and students for their validity during the program.

The S.B.L. Examination scores reported in this study were made by students who went through the program in its formative stages. The success rates reflect 85% on State Board Licensure Examination. More significantly the mean score for the group was 491.77 which compare favorably with the national average of 500.

The time involved for the students to complete the practical nursing program varied from 7 months through 15 months. This time variation would tend to support the fact that it is more significant to be able to demonstrate knowledge, skills, and attitudes than to spend x number of days in a program.

These findings are presented in view of the known weaknesses of this research:

1. Uniqueness of the population.
2. Relatively small number of students.
3. Large number of variables.
4. Length of time on the job.

It is believed that these findings do raise questions which substantiate the need for further research, particularly in the relationships between our ability and achievement measures and successful job performance.

PART II

CHAPTER I

COMPONENTS OF THE HEALTH OCCUPATIONS PROGRAM

Rationale

The hypotheses expressed in Part I of this Study were the bases for the design of the Health Occupations Program. It was believed by project supporters that given the advantages of educational technology and a personally-involved faculty applied to a well-developed curriculum, disadvantaged adult students could and would find higher degrees of success in health occupations than had been possible in traditional programs.

Philosophy

The program was based on the philosophy that all persons have a desire to acquire more knowledge, and that in order to achieve this knowledge, they must experience success in educational endeavors. This success could be obtained in small, successive intervals with a curriculum designed on a unitized basis. It was further believed that persons who feel fulfilled and satisfied will be valuable and functional members of society. The program was designed to assist disadvantaged adults to find job satisfaction and self-fulfillment by becoming successful in a health occupational role. (See Appendix G for STATEMENT OF PHILOSOPHY)

Objectives

The following were broad goals which were set forth in the inception of the program:

1. To assist the Tucson community in meeting increasing needs for qualified health personnel by:
    a. Preparing graduates who can perform effectively on the job in the health field
    b. Preparing persons who lack salable skills for employment in the health field
    c. Minimizing attrition rates from the health occupational programs
    d. Facilitating the opportunity for mobility in the health field
2. To compile and evaluate data for research purposes which can be used as a basis for further research and development toward the above goals.

(For student objectives as they relate to the practical nurse, see Appendix H).

PART II

CHAPTER II

CONCEPTS APPLIED TO ENHANCE STUDENT SUCCESS

Career Mobility

Since man has been taught to evaluate his worth to society and sometimes his worth in the sight of God by the level of his occupation and the quality of his performance in it, the Health Occupations Program was designed to enhance the opportunities for mobility by allowing the student to share in the planning of his future. It was believed by the Project conceptors that people should not be locked into jobs without an opportunity for mobility--horizontally, as well as vertically.

Vertical mobility was provided in the health occupations program through the utilization of a core curriculum. A student completing the core would receive a certificate as a nursing assistant. The student had the option of working at this level or continuing to adding more units to become a practical nurse. As stated earlier, 289 students have been enrolled into the program. 52 (18%) have completed the practical nurse program. 91 students are currently enrolled, many of which will be completing the practical nurse program within the next few months.*

Lateral mobility was provided by allowing a student who had completed the core to take 1 additional unit to become a ward clerk (unit clerk), physical therapy aide, central service aide, or home health aide.

This program is in line with the Arizona State Nurses' Association recommendations that faculties of established educational programs in nursing immediately develop methods by which the experiential and educational learning of those persons whose goals in nursing have altered may be realistically evaluated. They suggested that every effort should be made to delete repetitive learning.

The author feels that one reason for the high success rates was that students had the opportunity to select and complete in the area in which they felt the greatest degree of satisfaction and success.

Curriculum Design (Core Curriculum)

A core program can provide a framework for continuing education when designed with continuity, sequence and integration which is sufficiently flexible to take into account the diverse backgrounds and experiences of adults and enhance the opportunities for mobility.

In designing the curriculum, an occupational analysis was utilized to identify knowledges, skills, and understandings common to more than one health occupation. The knowledges, skills, and understandings then became the basis for the 8 basic units in the core curriculum.

*See Appendix I for Career Ladder Concept
Appendix J for Curriculum Guide
Appendix K for Practical Nurse Program
Appendix L for Practical Nursing Student Final Record

All students coming into the program take units 1-8, upon completion of which they receive a certificate as a nurse assistant. This is important for the disadvantaged student because this indicates they have succeeded at the first level and are employable in this role. During or after the core, a student may select one additional unit (from 9-13) which will prepare them for various assistant level positions. The students may complete 6 more units after the core to become practical nurses.

In concurrence with other research current findings, core curriculum students appear to:

1. Become oriented to and gain understanding of health service resources.
2. Gain understanding of and experience with team relationships.
3. Become acquainted with health field ethics.
4. Gain skills to achieve and maintain asepsis.
5. Develop beginning skills in maintaining environments conducive to patient welfare.

Unitized Self-Learning Packages with Defined Terminal Performance (Behavior) Objectives*

Success in small steps appears to be a key to reinforcing success which is a requisite for success. Repetitive failure has been the experience of most of our students. The curriculum was designed into units, with lessons in smaller units (modules), so that the student had a system for small successes which inherently accumulated into larger successes.

This disadvantaged population had many realistic personal problems which demanded absence from the program for prolonged periods of time. In a traditional program, students would either drop or be dropped. However, the curriculum in a unitized form gave the students a road map which they could follow. It showed them the distance, along with the type of highway. When students were forced to be out of the program for various periods of time, they could work on the material at home and return to school when the crisis was over.

The faculty used the contract method of encouraging students to set their own goals. For example, by having the curriculum unitized, a student can contract (agree with the instructor to perform) to complete one module a week, for instance. This proved to be a means of helping the students learn to plan and organize their time and energies. It also appeared to be a motivational factor.

Each lesson (module) was designed with the same format:

1. Rationale - reason why the lesson was important to their goal (role)
2. Objective - a broad goal to be accomplished
3. Assignment - how to go about learning about the goal
4. Classroom objectives - what the student must know in order to pass the paper-pencil tests
5. Clinical objectives - what the student must be able to perform in the clinical area (includes knowledge, skills, and attitude)

*See Appendix M for Unit Descriptions
Appendix N for Curriculum Outline
Appendix O for Sample of Unitized Lessons

It was believed that the purpose of the instructional objectives was to make clear to teachers, students, and other interested persons what it is that needs to be learned. Educational objectives became the criteria by which materials were selected, content was outlined, instructional procedures were developed, and most significantly, how tests and examinations were prepared. All aspects of the educational program were means to accomplish the basic educational goals.

It is believed by the author that curriculum revision, in a society as fast-paced as ours, must be constant; it will never be completed. In view of the fact that change is so rapid, educators cannot cling to content of earlier decades, or be ineffective in curriculum development, if education is to be relevant to the needs of the student and of society.

It is recommended by the author that all persons in the State of Arizona, who read this project report, seriously consider the possibility of a behavioral data bank located in the State level which would be easily accessible to all health occupations educators in the State of Arizona. It is believed that a cooperative, collaborative effort by leading professionals in health services and health education could, through the use of computerized technology, identify minimum behaviors required of each health occupational role. This behavioral data bank would and should be revised on a frequent, systematic basis to keep abreast of the changing needs and roles in the health field in the State of Arizona. It would serve the health service agencies by helping reduce the confusion which currently exists and will increase with our traditional systems. It would serve the health educators in planning and implementing educational programs which are current and relevant. It would serve the student by enhancing the opportunities for mobility within and between health occupational program. It is believed that the behaviors which have been identified in this project and evaluated by many of the health service agencies in the Tucson area could serve as a beginning to establish a behavioral data bank at the assistant and practical nursing levels.

Open-Entry, Open-Exit Concept

Based on the concept that a student learns--not the class, the health occupations program was designed for individualized instruction where the student would move at his own pace of learning through the program.

Our results with this concept were consistent with the findings of Edling who reported the following results in changed behavior of learners and teachers: interest in school activities; disappearance of most traditional discipline problems; increasing number of high scores on specific achievement measures; harder work by teacher, but with a feeling of satisfaction that efforts were helping students.

An additional advantage was that if illness, emergencies required absence from the program for a relatively short period of time, the student did not need to be terminated or make up time, per se, but returned and resumed where they left off.

One limitation was the vast quantity of materials needed which were difficult to develop and costly. It is believed by the author that this difficulty along with the cost factor would be indication for a need for a State Guide to be used by new programs with smaller faculties who cannot possibly accomplish this task alone. Clarification should be made that a State Guide does not in any way decrease the individuality of the teaching program nor does it reduce the opportunity for creativity on the part of the individual teacher. In fact, the reverse is true. With the bulk of the curriculum development initiated, it would allow the instructors to spend more time on creativity and less time on individually deciding in what depth or to what degree to present which topic.

Open-entry, open-exit concept means that our program was budgeted for x number of students. If a student were to withdraw or complete any portion of the program and choose to seek employment, that student could be replaced with another, regardless of the day or date.

The open-entry, open-exit concept was adopted on the belief that time alone is not a factor of proficiency. This was reinforced when we found a wide variation in the time it took the individual students to complete the core. The program was designed with the belief that it would take an average sutdent approximately 3 months (12 weeks) to become a nurse assistant. It was found that students did complete the core in as little as 5 weeks and as many as 24 weeks. The practical nursing portion of the program has been completed in as little as 7 months and as many as 15 months. In traditional programs, fast students often become bored when forced to sit through x number of classes, and, conversely, slower students often drop or are dropped when they do not learn in the same length of time as the class.

Educational Technology - Multi-Media Approach

The Health Occupations Program employed a multi-media approach to education because it was believed that this is a more systematic approach to learning. More important than the media and the machines involved are the potentials for new dimensions of freedom for teachers which is one of the most important parts of the reorganization of instruction. The Program teachers were able to have more time to work as professionals at critical points in the learning process and more control of the learning environment.

Instructors prepared a library of recorded data on cassettes to correlate with each module (lesson) which covered the essential content which they would have presented on the lesson in a traditional classroom setting. This provided students a means to work ahead of the group, to listen to the material if they were not present during classroom activities, and to listen repetitively if they learn slowly. Guest speakers were also taped and included as part of the resource materials. Audio-tapes were also used for students to record and evaluate their own communication skills.

The video tape recorder (V.T.R.) proved to be extremely valuable for motivated sessions in helping students to evaluate their own skills against a given set of criteria and for role-playing activities which included opportunities to practice and evaluate health occupational-type situations without the threat of the clinical areas.

The overhead projector allowed the faculty to prepare valuable tools (transparencies) inexpensively. The overhead has the advantage of allowing eye-contact with the students while using a visual aid in a lecture-discussion type presentation.

Commerically-prepared materials such as films, filmloops, filmstrips, and records have been utilized heavily to add variety, to stimulate involvement, to allow students to learn at their own pace. (See Appendix P for Book List).

It should be emphasized that these media were the means--not to be confused with the end--the performance objectives.

It has been brought to my attention that other programs which have attempted this type of program have allowed students to go "on their own" almost entirely. This was not the case in the Health Occupations Program. Students were in the clinical area under supervision a minimum of 12 hours per week from the second week that they were enrolled into the program. Classes were held a minimum of 18 hours in the core and 16 hours in the balance of the program. During this classroom time, teachers were encouraged to be innovative, creative, actively encouraging student involvement in a variety of stimulating classroom activities--discussions, role-playing, demonstrations, return-demonstrations, etc., with a minimum amount of lecturing. It was believed by the author that this classroom involvement was expedient for the success of the majority of the students. They tend to learn and be reinforced from each other as well as from the instructor. The unitized packages and the audio-visual materials were guides and tools, but not replacements of classroom or clinical activities.

Pass-Fail System of Grading

Upon successful demonstration of the classroom performances, primarily paper-pencil type tests, and clinical performances, which included knowledges, skills, and attitudes, the student was given a grade card stating she/he had completed the unit by successfully demonstrating both classroom and clinical performances.

Grades were not given in the traditional manner.

It was believed and demonstrated that receipt of a grade card for completion of one unit was a motivational factor to complete the next unit.

STUDENTS' EVALUATIONS OF THE PROGRAM

Since a program exists for the student, the following statements were recorded as indicative of their perception of the project as a challenging, rewarding experience:

"I am very pleased with Project HOP. I think that the curriculum is one of the best of any school, including Kress. The instructors are all very concerned that we understand, and learn thoroughly our work. They take extra time to help us and are not pushy. I personally am very thankful for this opportunity. I feel confident that I am getting a thorough training for L.P.N.." ---Letty Kelly

"I think Project HOP is excellent. I was out for two months with injuries received in a car accident and was able to return and begin where I had left off. Thanks for this chance!" ---JoAnne Fry

"What Project HOP means to me. To me I think it's great. Because if someone or a group of people have the patience to put up with me and have gotten me to where I am, it's got to be more than great. This program really bends forward and backwards to get us where we want to be, or go." ---Nellie R. Torres

"I dig Project HOP because we have much freedom to work at our own speed with no pressures to finish by a dead line. We have an opportunity here that we couldn't get anywhere else because of lack of finances." ---Karen Garza

"Project HOP has opened the door to a new life for me, given me encouragement, and the promise of a successful future in a challenging and rewarding profession. Without Project HOP, it would have been many years before I could have, if at all, received any further education. I will always be grateful to all those who took the time to care about me." ---Joan Lane

FACULTY EVALUATIONS OF PROGRAM

The success of this, like any other program, depends on the faculty who implements it. Most of the faculty who were employed had expertise in the health field, but lacked teaching competence. Competence to use innovative approaches to education needed to be developed. Weekly faculty-inservice programs were planned and conducted by the project director to develop knowledges, skills, and experience in the teaching/learning process. Philosophy, objectives, functions, principles, conditions, materials, and methodology were covered in theory and practical application as they could be related to the health occupations program.

Faculty members, with the Director, prepared the individualized instructional materials which lead the students to the objectives. Innovations often require additional time (e.g.- writing, re-writing objectives). The teachers were willing to contribute extra time and effort when they believed some benefit would accrue to the students. However, most of the additional time required was found outside regular school hours. Effort was made not to add to the teachers already over-burdened existence. Since education serves both as a leader and follower of society, creative and courageous adaptation to change was our challenge in designing this system for preparing health occupational personnel.

The following statements from faculty members reflect their feelings about their experiences in the project:

"Rewarding experience in seeing the personal growth of students and a learning experience for my personal growth to be associated with such new ideas and challenging experiences." ---Carol Orin

"I find teaching for Project HOP not first a "job" but a rewarding and enlightening experience. I strive to share this feeling with the students." ---Susan Kane

"Students are anxious to have something for the first time in their life that will prepare them for service. It is rewarding; I can help them, I've been there." ---Jerri Lewis

"It is challenging. You learn to use many different resources in this type of program. It offers much self-satisfaction." ---Audrey Englestad

The late Perle Ayers, a sociologist at Berea College, was instrumental in developing many constructive programs. He said there are four things one can do about change:

1. "Ignore it--pretend things are just as they always have been and will be.
2. Resist it--prefer things not as good as they could be for fear they might be worse than they are.
3. Adapt and accept with an easy, false enthusiasm under the delusion of action, and
4. Design and create the future--any true leader always is exposed to risk, but he takes the risk in the hope of real gain, where inaction only can court certain disaster."

The health occupations program discussed here was designed in hope of real gain. It is hoped that this project will open doors for corpsmen and other persons with some health-service training to continue their education in the health field, building on what they already know. It is further hoped other health career educators will join in pooling efforts, collaborating to develop increasingly more effective systems for health occupations education.

Part Two
SUMMARY and RECOMMENDATIONS

The concepts of a core curriculum career ladder from nurse assistant (aide) level to practical nurse level, unitized self-learning packages and a multi-media approach to education have proved feasible and practical with a unique population. Implementation of these concepts together with a personally-involved faculty and supportive services of the agencies has led to student success and to the broad goals of the project.(Page II-1)

It is believed by the author that these concepts have equal practicality in traditional programs. It is recommended that further work be done toward implementing more of these concepts into our traditional programs and the integration of disadvantaged students into the mainstream of our educational system.

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Appendix A

Data Collection Plan

Student Assessment

Relative Time* (1970-1972)	Instrument
Preadmission of Students	General Aptitude Test Battery Adult Basic Learning Exam Personal Data Blank
During Student's Program	Faculty's Subjective Assessment of Knowledge of Skills of Attitude
Toward Completion of Student's Program	National League for Nursing Examination Three Units of Content Psychology Nursing including Pharmacology
Upon Completion of Student's Program	State Board of Nursing Licensure Examination

Program Assessment

During Student's Program	Student's Evaluation of Program
During Program	Faculty's Evaluation and Revisions
Upon Student's Completion	Graduate's Evaluation of Program
Upon Completion of Curriculum	Health Agencies Evaluation of Curriculum

*Open-entry, open-exit policy does not allow specific date.

Appendix B

Identifying the Disadvantaged

A provision of the Amendments to the Vocational Education Act of 1968 is that persons who have not heretofore been adequately served by the regular Vocational Education programs shall have ready access to vocational instruction designed to fit them for employment in a recognized occupation. The "Act" identifies such individuals as the disadvantaged.

What is needed in order to reach these persons and ensure better education for them is to develop their own criteria that will be used to identify disadvantaged persons. As a beginning framework for identifying and selecting disadvantaged persons, the following qualitative guidelines are suggested:

Identifying Disadvantaged Persons

A. Persons With Academic Needs

1. Students with low achievement scores and who are not classified as mentally retarded.
   For example: Students who are capable of learning, and with the patience and the opportunity to participate in a different kind of program, may be motivated toward higher levels of achievement.
2. Students who have not found an interest in learning or in school work as a result of poor educational background and home environment.
   For example: Students who have become alienated and disenchanted with the school system and need encouragement and guidance toward a meaningful academic and vocational program.
3. Students who demonstrate a continued pattern of failing and seem discouraged in their school work.
   For example: Students who are dropout prone and need help to become work-oriented and need encouragement to continue their education for job preparation.
4. Students who have poor speech, low-level reading ability, and limited formal vocabulary who are not mentally deficient.
   For example: A high school student who has lower than seventh grade reading skills.
5. Students who have linguistic barriers.
   For example: Students who come from homes where a foreign language is spoken and students of parents who retain foreigh-language idioms despite assimilation into the local culture.

continued..

6. Students who have poor attendance records and are not making normal academic progress in regular classes.
   For example: Students who do not attend school regularly and find it difficult to meet the regular academic standards of the high school and who need special supportive services and additional attention.
7. Students who have dropped out of high school and are unemployed or underemployed and need training.

B. Persons With Special Social Needs
   1. Persons from hardcore, poverty areas who live apart from the mainstream of the community.
   2. Persons who display a negative attitude toward learning and who are plagued by a negative self image.
   3. Persons who have high incidences of involvement with the police and are hostile toward law and order.
   4. Persons who lack personal motivation and lack experiences with successful "models" of their own ethnic group.

C. Persons With Special Economic Needs.
   1. Persons from low-income families who have nutritional and other health needs and/or lack adequate finance to obtain essentials for going to school (transportation, school supplies, etc.).
   2. Persons whose parents are dependent upon public assistance.
   3. Persons who are economically illiterate.

Appendix C

TUCSON PUBLIC SCHOOLS
PROJECT HOP

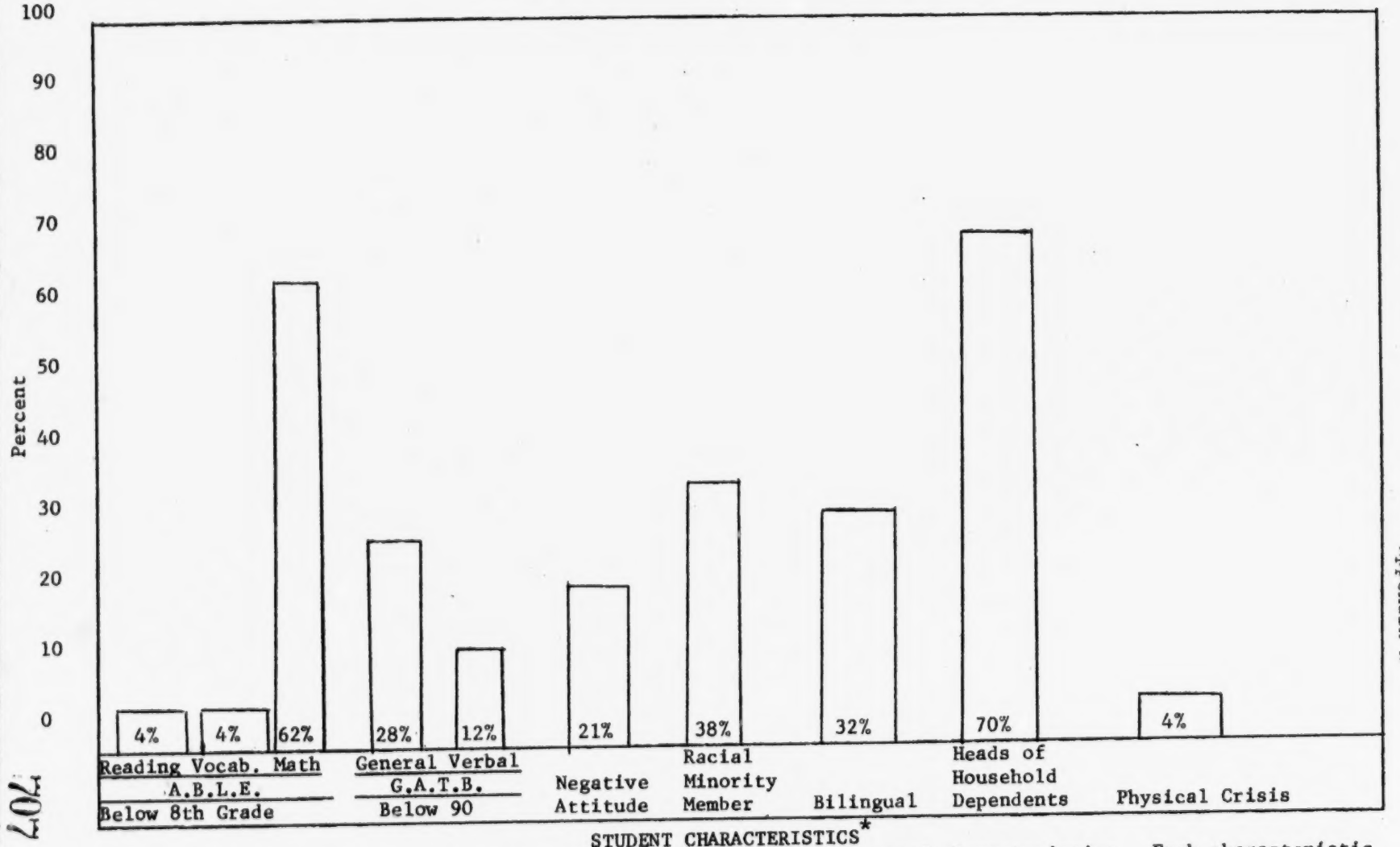
STUDENT SELECTION REQUIREMENTS

1. Functional reading, writing and comprehending English at eighth grade equivalency. *
2. Functional mathematical skills at eighth grade equivalency. *
3. Age 17+ to meet the State law for age and licensing requirements.
4. A complete physical examination, including chest x-ray, serology.

* Adult Basic Learning Examination used as criteria.

NOTE:
General Aptitude Test Battery (G.A.T.B.) given for research purposes.

HEALTH OCCUPATIONS PROGRAM
PRACTICAL NURSING STUDENT POPULATION DESCRIPTION
Graduates - March 1972



The percentages indicate the percent of the graduates with each of the named characteristics. Each characteristic requires special behavioral adjustments which students must make in order to succeed in practical nursing today.

Project HOP

Appendix E

STUDENT SUCCESS

As measured by the Arizona State Board of Nursing Exam

Note: 85% Success (scores above 350).
55% of the Students made scores above the national average (500).

March 1972 - Practical Nursing Graduates

SUCCESS* RELATED TO EACH STUDENT'S CHARACTERISTICS
VARIABLES WHICH REQUIRE ADJUSTMENT ON PART OF STUDENT TO SUCCEED
Health Occupations Program Practical Nurse Graduates
March, 1972

	Student's Class Rank per State Board Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
*STATE BOARD SCORES																																																
600 or Above		x	x	x	x	x																																										
500-599							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																						
400-499																											x	x	x	x	x	x	x	x	x	x	x	x	x									
350-399																																								x	x							
300-349																																									0	0	0	0	0			
200-299																																														0	0
*JOB PERFORMANCE		x	x			x		x		x	x		x	x					x	x	x	x		x			x	x	x		x		x	x	x		x	x			x	x	x		x	x	0
STUDENT CHARACTERISTICS																																															
READING BELOW 8th GRADE																																													x		x
VOCABULARY BELOW 8th GRADE																																													x	x
MATH BELOW 8th GRADE		x					x		x						x	x		x		x		x	x	x		x	x		x	x	x	x	x	x		x	x			x	x	x	x	x	x	x	x
GENERAL APTITUDE BELOW 90															x		x				x			x	x			x					x		x				x			x			x	x	x
VERBAL APTITUDE BELOW 90															x																		x		x									x	x	x
NEGATIVE ATTITUDE											x			x			x	x														x		x									x	x			x	x
RACIAL MINORITY														x					x	x			x		x						x		x	x		x	x	x			x	x	x	x	x	x	x	x
ENGLISH 2nd LANGUAGE														x									x								x		x	x		x	x	x			x	x	x	x	x	x	x	
HEAD/HOUSEHOLD DEPENDENTS		x		x		x	x	x		x	x		x	x			x	x			x	x	x	x	x			x	x	x	x	x		x		x	x		x		x	x	x	x		x		x
PHYSICAL CRISIS																																													x	x			
STATE BOARD LICENSURE SCORES		600+												500+																	400+												350-300				200	
AVERAGE OF VARIABLES		.8												2.0																	3.2												4.6				7.5	

TUCSON PUBLIC SCHOOLS
PROJECT HOP
STATEMENT OF PHILOSOPHY

Appendix G

The general educational philosophy of the Tucson Public Schools District One is accepted by the faculty of Project HOP. In addition, we believe that all persons have a desire to acquire more knowledge, to learn more, and that to achieve this, they must experience success in education endeavors. We believe that Project HOP allows and helps each student to succeed at some level. We further believe that persons who can feel fulfilled and satisfied will be valuable and functional members of society in the American tradition.

We believe that mobility in health field careers will primarily increase the numbers of persons who can find success and make effective contributions to the health occupations; and secondarily will allow students who have the desire and the ability to continue to move vertically and/or horizontally in the health field.

We believe that our goal is to identify common areas of knowledge and skill in the health fields and to develop a curriculum based on these common areas. This curriculum will identify and assess those terminal behaviors essential to successful job-entry level performances in more than one of the health occupations. We believe that curriculum development in an everchanging society and in a dynamic field is a continuous, on-going process. The present curriculum represents a beginning which will be continually evaluated and revised to remain current and useful. We believe that utilization of modern educational technology will enhance the learning process.

It is also our belief that it is essential to provide clinical experiences in the health field correlated with classroom activities. This correlation of experiences must be directed toward achievement of clearly defined written objectives leading to the identified terminal behaviors.

We believe "The unique function of the nurse is to assist the individual, (sick or well), in the performance of those activities contributing to the health or its recovery, (or to peaceful death), and that he would perform unaided if he had the necessary strength, will, or knowledge. And to do this in such a way as to help him gain independence as rapidly as possible."[1]

We believe that practical nursing is an integral and essential part of nursing services which helps people to recognize and achieve optimum health - a fundamental right of every individual.

We recognize the legal authority for the practice of practical nursing in Arizona which indicates that licensed practical nursing means the performance of technical skills performed under the supervision of the registered professional nurse or physician registered professional nurse in more complex situations.

We believe that the ultimate goal of all nursing education is the welfare of patients. The primary, immediate goal of a practical nursing program is the education of students.

The faculty members of Project HOP believe that the education program we are developing will produce practical nurses able to function in their role with vocational efficiency and personal satisfaction, but particularly with concern and knowledge aimed at the well-being of the patient.

Accepted by the faculty of Project HOP
May 19, 1971

[1] The Nature of Nursing, Virginia Henderson

Appendix H

TUCSON PUBLIC SCHOOLS
PROJECT HOP

Practical Nursing
STATEMENT OF STUDENT OBJECTIVES

The Health Occupations Cluster Curriculum is designed to provide experiences needed to enable the nursing students to perform the functions recommended by NAPNEs and The Arizona State Nurses Association (Proposed Joint Statement, 1970):

I. The practical nursing students* will participate in the planning, implementation, and evaluation of nursing care and will be able to teach the maintenance of health and prevention of disease.
   A. The student will be able to recognize optimum health and symptoms of deviation from same.
   B. The student will be able to demonstrate skills in observing, recording and reporting to immediate superior.
   C. The student will be able to demonstrate skill in applying basic principles in performing technical procedures, adjusting these procedures to the needs of the individual patient.
   D. The student will be able to perform personal and supportive health care tasks for patients of all ages, applying principles of prevention, therapy, and rehabitilation.

II. The practical nursing students will be able to recognize and apply fundamental principles of human behavior, positively and effectively.
   A. The student will be able to communicate with patients, health team members, health facility administrators and persons in the community, using appropriate methods and terminology.
   B. The student will be able to function effectively as a person and as a member of a health team.

III. The practical nursing students will be able to recognize the health field as a dynamic social force in a changing and complex society.
   A. The student will be able to identify trends of nursing.
   B. The student will be able to recognize functions of nursing organizations.
   C. The student will be able to recognize and demonstrate behavior which complies with the legal aspects of practical nursing.
   D. The student will be able to contribute toward activities which promote nursing in the community.

IV. The practical nursing students will be able to move (if they desire and appear to have the ability).
   A. The student will be able to move laterally in the health

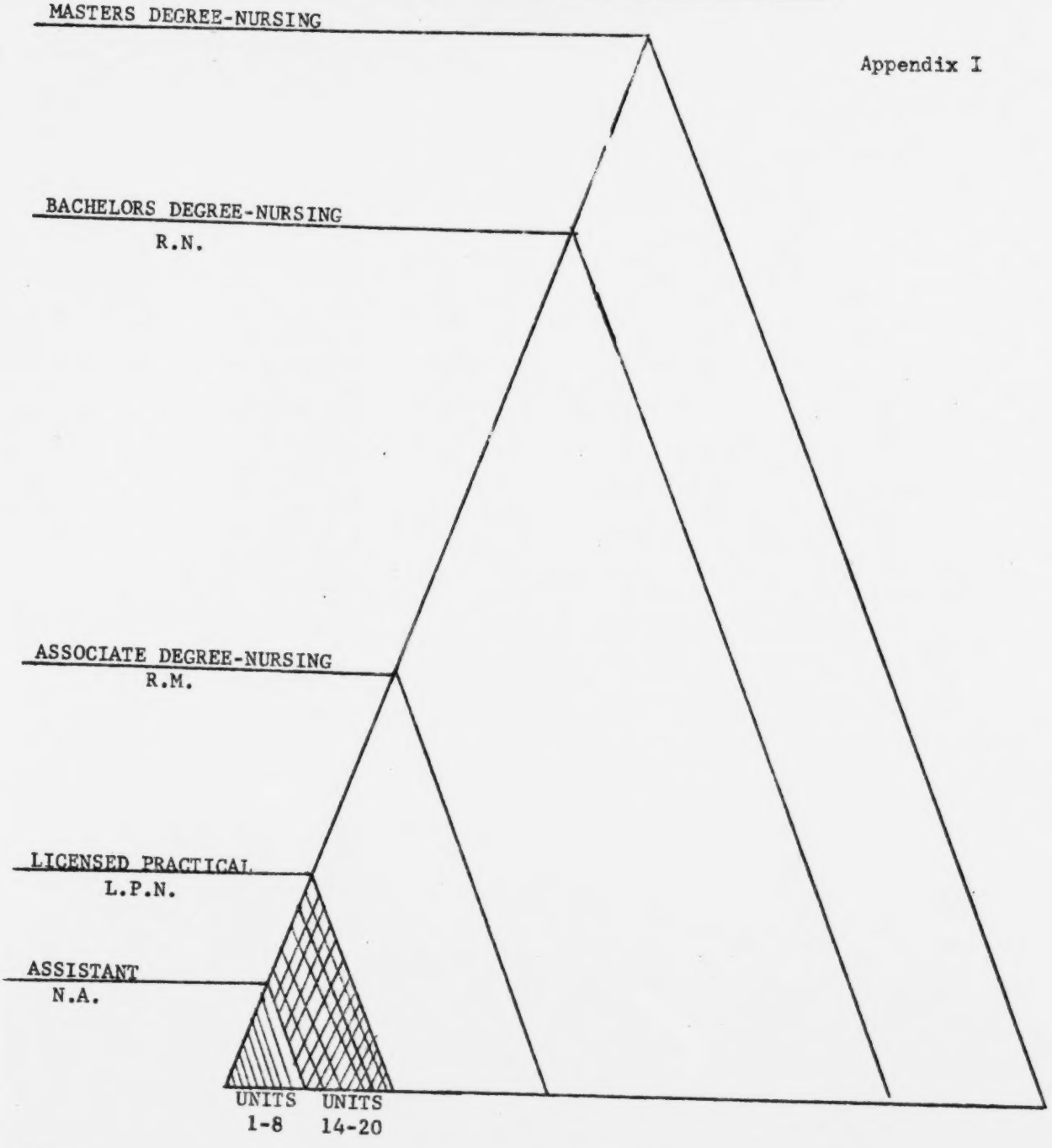
continued..

field (e.g., on assistant level--from nurse assistant to unit clerk--by adding to current knowledges, skills, without replicating acquired knowledges and skills.

B. The student will be able to move (if they desire and appear to have the ability) vertically in the health field (e.g., from assistant level to practical nursing level by the completion of additional units.

CAREER LADDER CONCEPT (NURSING EDUCATION)

Appendix I



UNITS

1 Overview of Health Occupations
2 Human Relations for Health Workers
3 Health Care Skills for Health Workers
4 Anatomy & Physiology for Health Workers
5 Nutrition & Diets for Health Workers
6 Asepsis for Health Workers
7 Medical Terminology for Health Workers
8 Nursing Care I

UNITS

14 Growth & Development Related to Nursing
15 Interpersonal Relationships in Nursing
16 Nursing Care of the Aged
17 Nursing Care of Children & Adults
18 Nursing Care of Mothers & Newborn
19 Pharmacology
20 Integration

HEALTH OCCUPATIONS CLUSTER - CURRICULUM GUIDE

UNIT NO. / TITLE OF HEALTH WORKER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Summary of Curriculum Guide
LEVEL I																					
1. Nurse Assistant	x	x	x	x	x	x	x	x													Core & 8 Level One
2. Unit Clerk	x	x	x	x	x	x	x	x	x												Core & 9
3. Central Service Assistant	x	x	x	x	x	x	x	x		x											Core & 10
4. Home Health Aide	x	x	x	x	x	x	x	x			x										Core & 11
5. Dietary Aide	x	x	x	x	x	x	x	x													Core
6. Surgical Aide	x	x	x	x	x	x	x	x		x											Core & 10
7. Physical Therapy Aide	x	x	x	x	x	x	x	x					x								Core & 13
LEVEL 2																					
8. Child Development Worker	x	x	x	x	x	x	x	x							x						Core, 8, 15 Level Two
9. Geriatric Nurse Assistant	x	x	x	x	x	x	x	x								x					Core, 8, 16
10. Pediatric Nurse Assistant	x	x	x	x	x	x	x	x						x							Core, 8, 14
11. OB Nurse Assistant	x	x	x	x	x	x	x	x										x			Core, 8, 18
12. Psychiatric Nurse Assistant	x	x	x	x	x	x	x	x							x						Core, 8, 15
13. Pharmacy Aide	x	x	x	x	x	x	x	x											x		Core, 8, 19
14. Medical Surgical Nurse Asst.	x	x	x	x	x	x	x	x									x				Core, 8, 17
LEVEL 3																					
15. Practical Nurse	x	x	x	x	x	x	x	x						x	x	x	x	x	x	x	Core, 8, 14-20

UNIT TITLES
VIEW OF HEALTH OCCUPATIONS
HUMAN RELATIONS-HEALTH WORKERS
HEALTH CARE SKILLS-HEALTH WKRS
ANATOMY & PHYSIOL.-HEALTH WKRS
NUTRITION & DIETS-HEALTH WKRS
ASEPSIS FOR HEALTH WORKERS
MED. TERMINOLOGY-HEALTH WKRS
NURSING CARE I (Units 1-7)
UNIT CLERK SKILLS (WARD CLERK)
CENTRAL SERVICE SKILLS
HOME HEALTH SKILLS
MED. ASSISTANT (DELETED)*
PHYSICAL THERAPY SKILLS
NURSING CARE OF CHILDREN
INTERPERSONAL REL.-NURSING
COMMUNITY HEALTH
NURSING CARE OF ADULTS
NURSING CARE-MOTHERS & NEWBORNS
PHARMACOLOGY
INTEGRATION & REVIEW

NOTE: Upon successful completion of a specific unit, student need not repeat to move vertically or laterally.

7 Occupational Positions - Level One
7 Occupational Positions - Level Two
1 Occupationsl Positions - Level Three
15 Occupational Positions - Total

*Unit 12 was deleted as role of medical assistant was not needed by Pima County, according to Pima County Med. Assn.

TUCSON PUBLIC SCHOOLS -- PROJECT HOP
Tucson Skill Center
Practical Nursing Program 1970-71

CORE (1-8)	Unit 14	Unit 15	Unit 16
12 Weeks	6 Weeks	4 Weeks	4 Weeks
453 Hours	240 Hours	160 Hours	160 Hours
1. Overview of Health Occupations 2. Human Relations for Health Workers 3. Health Care Skills for Health Workers 4. Anatomy & Physiology for Health Workers 5. Nutrition & Diets for Health Workers 6. Asepsis for Health Workers 7. Medical Terminology for Health Workers 8. Nursing Care I (Applies Theory from Units 1-7) Lec. Hours=261 Lab Hours=192	14. Nursing Care of Children (Includes Growth & Development) Lec. Hours=96 Lab Hours=144	15. Psychology Related to Nursing Lec. Hours=64 Lab Hours=96	16. Community Health (Includes Nursing Care of Aged, Rehab) Lec. Hours=32 Lab Hours=128

Unit 17	Unit 18	Unit 19	Unit 20
9 Weeks	4 Weeks	3 Weeks	6 Weeks
320 Hours	160 Hours	160 Hours	240 Hours
17. Nursing Care of Adults Lec. Hours=128 Lab Hours=192	18. Nursing Care of Mothers & New borns Lec. Hours=64 Lab Hours=96	19. Pharmacology Lec. Hours=64 Lab Hours=96	20. Integration & Review Lec. Hours=96 Lab Hours=144

Equivalent Time For Average Student To Meet Program Requirements
Total Weeks = 48
Total Hours = 1893
Total Credits = 24

Append

TUCSON PUBLIC SCHOOLS
Tucson Skill Center
55 North 6th Avenue
Tucson, Arizona 85701

Appendix L

STUDENT FINAL RECORD
PRACTICAL NURSING

CITIZENSHIP _____

:ord of _____ Birthdate _____
(Last) (First) (Middle) (Maiden)

nission Date _____ Completion Date _____

JCATION BEFORE ENTERING SCHOOLS OF NURSING

Elementary School _____ (Years Complet
(Name & Address)

Secondary School _____ (Years Complet
(Name & Address)

SUMMARY OF PROGRAM

SUBJECT	NO. OF HOURS Lec.	Lab	Total	NO. OF CR
t 1. Overview of Health Occupations	3	6	9	N.C.
2. Human Relations for Health Workers	27	7	34	½
3. Health Care Skills for Health Workers	27	7	34	½
4. Anatomy & Physiology for Health Workers	27	7	34	½
5. Nutrition & Diets for Health Workers	27	7	34	½
6. Asepsis for Health Workers	27	7	34	½
7. Medical Terminology for Health Workers	27	7	34	½
8. Nursing Care I (Applies Theory from Units 1-7)	96	144	240	3
14. Nursing Care of Children (Includes Growth & Development)	96	144	240	3
15. Psychology Related to Nursing	64	96	160	2
16. Community Health (Includes Nursing Care of Aged, Rehab.)	32	128	160	2
17. Nursing Care of Adults	128	192	320	4
18. Nursing Care of Mothers & Newborns	64	96	160	2
19. Pharmacology	64	96	160	2
20. Integration & Review	96	144	240	3
TOTALS	805	1088	1893	24

rsing Assistant Certificate awarded _____.
(Date)

e above student has completed the above program, meeting the requirements as set forth i
rriculum.

AGENCIES OR INSTITUTIONS USED FOR CLINICAL EXPERIENCE

cson, Arizona

mmakers Nursing Home	
ma County Hospital	
. Joseph's Hospital	
. Mary's Hospital	
cson Medical Center	
lley House Nursing Home	
sited Multiple Comm. Agencies	

censed by Examination in Arizona on _____. _____
(Date) State Board Score

_____
(Signature)

_____ _____
(Title) (Date)

TUCSON PUBLIC SCHOOLS
PROJECT HOP

Appendix M

UNIT DESCRIPTIONS

UNIT 1 -- Overview of Health Occupations
This unit provides a short look into the various job opportunities in health occupations. The student will gain understanding of health facilities on a local, state, national, and international level.

UNIT 2 -- Human Relations
This course is designed to help students look at themselves and through the use of audio visual aids and small groups understand how they will change or improve behavior to adjust to new job situations as a nursing assistant.

UNIT 3 -- Health Care Skills I
The student is shown the correct skills to use to keep patients safe. He will learn basic first-aid procedures.

UNIT 4 -- Anatomy & Physiology
This unit includes a basic knowledge of anatomy and physiology related to the needs of health care workers who require a general understanding of how the body is formed and how it functions in normal health.

UNIT 5 -- Nutrition and Diet Therapy
This unit is designed to teach the student basic nutrition for normal adults and introduce him to the basic hospital diets.

UNIT 6 -- Asepsis
Asepsis as it applies to the hospital environment is discussed and the student is taught to protect patients, nursing staff, and himself from disease.

UNIT 7 -- Medical Terminology
This unit includes a basic knowledge of medical terms related to the need of health care workers who must be able to understand and communicate effectively with other health care workers.

UNIT 8 -- Nursing Care I
The role and responsibilities of the nurse assistant are presented and discussed with development of the basic knowledge and skills needed to give nursing care to the individual. Principles of other health care courses are included in evaluating student performance.

UNIT 14-- Peds Nursing
Pediatric nursing is taught with a realization of the nurses' need to develop a broad and deep perspective of the meaning of nursing children. Objectives are obtained through class work and clinical experience so they will continue to grow as he inconponates fundamental principles while caring for the hospitalized child and his family.

UNIT 15-- Aspects of Interpersonal Relationships: Communications in Nursing
This course is designed to utilize techniques of group process to enable students to gain insight into their own behaviors and behaviors of their patients. Major emphasis is placed on communication skills and observation through the use of group discussion, role playing and

UNIT 15-- audio visual aids. Principles of mental health and mental illness provide the frame work for this unit.

UNIT 16-- Community Health (Includes Nursing Care of Aged, Rehab.)
This course has as its objective-the acquaintance of the student with various health facilities in the local community; so that the student wil be aware of their specific functions in order to enable her to assist in meeting specific health needs of the members of the community. Emphasis will be on geriatric nursing; aspects of rehabilitation; and on drug abuse.

UNIT 17-- Medical-Surgical Nursing
This course includes the study of common medical and surgical conditions and the clinical practice of nursing care of these patients. The principles of adapting basic nursing care and related procedures to the individual patient are practiced. Students are introduced to skills in contributing to a nursing care plan.

UNIT 18-- Nursing Care of Mothers and Newborns
Unit 18 is designed to prepare the student to understand her new role in the nursing of mothers and infants with confidence and competence. It is concerned with the prevention, promotion, and maintenance of health during the prenatal, anti-partal and neonatal period; including the complications that are related to obstetrical nursing.

UNIT 19-- Pharmacology
This course covers the elementary principles involved in the administratic of medications and in weights and measures. The medications commonly used in the treatment of disease are discussed in terms of indications, contraindications, side effects and derivation. Students practice administering oral and parenteral medications.

UNIT 20-- Integration
Integration is the course designed to check final proficiency in application of knowledge, skill, and attitudes in the role of a practical nurse. Students will be in the clinical area the majority of the time. Performances in team medications, total patient care and floor treatments will be evaluated by the instructor.

Tucson Public Schools
Tucson Skill Center
Project HOP

CURRICULUM OUTLINE

UNIT 1 - OVERVIEW OF HEALTH OCCUPATIONS

MODULE A - Health Care, The Local and National Health Team
MODULE B - The Professional Health Team
MODULE C - Health Occupations Opportunities and Functions of Specific Health Occupations
MODULE D - Educational Preparation for Specific Health Occupations
MODULE E - Benefits of Specific Health Occupations
MODULE F - Mobility of Specific Health Occupations

UNIT 2 - HUMAN RELATIONS FOR HEALTH WORKERS

MODULE A - Philosophy of Individual Worth
MODULE B - Behavior as a Health Worker
MODULE C - Ethics for Health Workers
MODULE D - Legal Aspects for Health Workers
MODULE E - Health Team Concept
MODULE F - Communications as a Health Worker
MODULE G - Interviewing for Employment

UNIT 3 - HEALTH CARE SKILLS FOR HEALTH WORKERS

MODULE A - Health Care Environmental Factors
MODULE B - Health Care Work Areas
MODULE C - Health Care Equipment and Supplies
MODULE D - Health Care Safety Factors
MODULE E - Lifting and Moving Patients
MODULE F - First Aid

UNIT 4 - ANATOMY AND PHYSIOLOGY FOR HEALTH WORKERS

MODULE A - Organization of the Body Related to Health Care Service
MODULE B - Muscular-Skeletal System Related to Health Care Service
MODULE C - Integumentary System (skin) Related to Health Care Servic
MODULE D - Digestive System Related to Health Care Service
MODULE E - Circulatory System Related to Health Care Service
MODULE F - Respiratory System Related to Health Care Service
MODULE G - Urinary System Related to Health Care Service
MODULE H - Endocrine System Related to Health Care Service
MODULE I - Reproductive System Related to Health Care Service
MODULE J - Nervous System and Special Senses Related to Health Care Service

UNIT 5 - NUTRITION & DIETS FOR HEALTH WORKERS

MODULE A - The Need for Good Nutrition
MODULE B - Meeting the Patient's Needs for the Basic Four Food Groups
MODULE C - Meeting the Patient's Need for the Six Nutrients Groups
MODULE D - Meeting the Patient's Needs for Nutrition (Therapeutic Diets)
MODULE E - Meeting the Patient's Needs for Nutrition (Food Fads and Fallacies)

continued..

Appendix N

IT 6 - ASEPSIS FOR HEALTH WORKERS

MODULE A - Asepsis: Definition and Meaning
MODULE B - Microbiology
MODULE C - Procedures For Control of Infection
MODULE D - Sterile Procedures as Samples of Surgical Asepsis

IT 8 - NURSING CARE I (Applies Theory from Units 1-7)*

MODULE A - The Role of the Nursing Assistant
MODULE B - Meeting the Patient's Need for a Comfortable Bed
MODULE C - Need for Cleanliness
MODULE D - Need for Food and Water
MODULE E - Need for Elimination
MODULE F - Need for Movement and Activity
MODULE G - Identifying, Recording, Reporting Patient's Needs
MODULE H - Meeting the Patient's Special Needs
MODULE I - Meeting the Patient's Needs for Comfort and Safety
MODULE J - Meeting the Patient's Needs for Sleep

Unit 7 under revision

continued..

Tucson Public Schools
Project HOP

Practical Nurse
CURRICULUM OUTLINE

CORE - Curriculum Outline, Units 1-8

UNIT 14 - GROWTH AND DEVELOPMENT

- MODULE A - Introduction to Pediatric Nursing
- MODULE B - Meeting Nursing Needs of Patients During Prenatal and Postnatal Periods
- MODULE C - Meeting Nursing Needs of Infants
- MODULE D - Meeting Nursing Needs of Toddlers (ages 1-3)
- MODULE E - Meeting Nursing Needs of Preschool Children
- MODULE F - Meeting Nursing Needs of School Age Children
- MODULE G - Meeting Nursing Needs of the Adolescent
- MODULE H - Meeting Nursing Needs of Children of Nation and of the World
- MODULE I - Role of Nurse in Community

UNIT 15 - ASPECTS OF INTERPERSONAL RELATIONSHIPS

- MODULE A - Identifying the Role and Functions of the Practical Nurse
- MODULE B - Mental Health Concepts
- MODULE C - Mental Illness--History, Definition, Care and Treatment. Orientation to Observation
- MODULE D - Meeting the Nursing Needs of the Mentally Ill--Acceptance and Communication
- MODULE E1- Meeting the Nursing Needs of the Mentally Ill--Communication
- MODULE E2- Meeting the Nursing Needs of the Mentally Ill--ADL (Activities of Daily Living) leading toward Mental Health

UNIT 16 - COMMUNITY HEALTH

- MODULE A - Trends and Concepts in Community Health
- MODULE B - Community Health Resources
- MODULE C - Meeting the Nursing Needs of the Patient with Long-Term Illness and/or Rehabilitation
- MODULE D - Meeting the Nursing Needs of the Patient with Alcoholism and other Drug Abuse Problems
- MODULE E - Meeting the Nursing Needs of the Community Members in Time of Emergency
- MODULE F - Meeting the Nursing Needs of the Patient with Social Diseases
- MODULE G - Meeting the Nursing Needs of the Aged Patient
- MODULE H - Legal Aspects in Nursing
- MODULE I - Professional Organizations in Nursing

continued..

UNIT 17 - NURSING CARE OF ADULTS

MODULE A - Patients in Illness
MODULE B - Musculo-Skeletal System
MODULE C - Circulatory System
MODULE D - Respiratory System
MODULE E - Gastrointestinal System
MODULE F - Urinary System
MODULE G - Endocrine System
MODULE H - Reproductive System
MODULE I - Integumentary System
MODULE J - Nervous System
MODULE K - Sense Organs (Eye and Ear)
MODULE L - Carcinomas
MODULE M - Infections
MODULE N - Allergies

UNIT 18 - NURSING CARE OF MOTHER AND NEWBORNS

MODULE A - Meeting Patient's Nursing Needs During Pregnancy
MODULE B - Meeting Patient's Nursing Needs in Labor and Delivery
MODULE C - Meeting Patient's Nursing Needs During Puerperium
MODULE D - Meeting Newborns' Nursing Needs

UNIT 19 - PHARMACOLOGY

MODULE A - Review of Basic Mathematics and Arithmetic of Solutions and Drugs Administration of Medications
MODULE B - Medications Used for Patients with Musculoskeletal System Disorders
MODULE C - Medications Used for Patients with Circulatory System Disorders
MODULE D - Medications Used for Patients with Respiratory System Disorders
MODULE E - Medications Used for Patients with Gastraintestinal System Disorders
MODULE F - Medications Used for Patients with Urinary System Disorders
MODULE G - Medications Used for Patients with Endocrine System Disorders
MODULE H - Medications Used for Patients with Reproductive Disorders
MODULE I - Medications Used for Patients with Integumentary System Disorders
MODULE J - Medications Used for Patients with Nervous System Disorders
MODULE K - Medications Used for Patient with Eye and Ear Disorders
MODULE L - Medications Used for Patients with Cancer
MODULE M - Medications Used for Patients with Infectious Disorders
MODULE N - Medications Used for Patients with Allergic Disorders

UNIT 20 - Is a Course Designed to Check Proficiency in Application of all Practical Nursing Knowledge, Skill and Attitudes into the Full Role of a Practical Nurse, under Supervision.

TUCSON PUBLIC SCHOOLS
PROJECT HOP

UNIT 17 MODULE G Assignment Sheet No.
UNIT TITLE: Nursing Care of Adults MODULE SUBJECT: Meeting the Nursing Needs of Patients with Conditions Related to Endocrine System

RATIONALE:
To give safe, effective nursing care to a patient with conditions related to the Endocrine System, you must have a knowledge of how the sciences can be adapted int the appropriate nursing action.

OBJECTIVES:
The practical nurse must be able to idenfity the physical psychological and social problems of patients with Endocrine System conditions, the practical nurse must re late her knowledge of the anatomy and physiology of the endocrine system into a pl of nursing action. Education, prevention and care will be functions of the health team.

ASSIGNMENTS:
1. Review Anatomy, The Endocrine System, Unit 4, Module H.
2. Read Total Patient Care, by Johnston, Chapter 16.
3. Study handouts and worksheets 18-G-1.
4. Review trainex Care of Diabetic Patient.

CLASSROOM EVALUATION:
1. Be able to define all vocabulary terms.
2. Be able to explain the relationship of anatomy and physiology to conditions of the endocrine system.
3. Be able to describe the condition along with the cause and symptoms of the conditions related to the endocrine system.
4. Given patient situations, be able to explain in writing the appropriate nursing action.
5. Given written questions regarding meeting the nursing needs of patients with conditions related to endocrine system, be able to name or identify the correct answers with 70% accuracy.
6. List 2 community resources and describe practical nurses role in making referrals to assist patients with special needs related to endocrine care upon discharge from hospital.

CLINICAL EVALUATION:
1. Determine from kardex and/or chart, patient diagnosis (type of patient illness)
2. Plan, implement and evaluate your own safe, effective nursing care for all assigned patients, and for all patients with whom you assist.
3. Identify specific patient needs and provide nursing measures to:
   (a) alleviate
      1. emotional stress
      2. abnormal growth and development
   (b) provide for
      1. comfort
      2. safety
      3. nutrition
      4. elimination
      5. teaching patient and family proper care
      6. clues of identification of signs & symptoms- of hypo-and hyper- glandular functions.
4. Observe, report, record all pertinent signs, symptoms, factors related to patie
5. Report, record nursing care provided.
6. Complete a nursing care plan on a minimum of 5 assigned patients.
   a. Include evaluation of nursing care in nursing care plans and in conferences with instructor.

continued..

ENDOCRINE SYSTEM (Continued)

CLINICAL EVALUATION (Cont.)

6. b. Include scientific principles underlying nursing action to meet patient problems.
7. Identify and be able to explain function and nursing care related to 3 categori of drugs used in treatment of endocrine conditions.
   (a) Hormones
      1. Gonadal
      2. Ovarian
      3. Panireas (Insulin or Hypoglycemic agents)
      4. Pituitary
      5. Suprarenal
      6. Testicular
      7. Thyroid
      8. Tissue - Building Hormones
   (b) Vitamins
      1. Fat Soluble
      2. Water Soluble
   (c) Minerals
      1. Non-nutrient
      2. Nutrient
8. Determine if a plan for maintenance and/or rehabilitation has been ordered. If so, describe plan and explain practical nursing responsibility.
9. Identify diagnostic tests and procedures done for the assigned patient and determine if the test results are within normal ranges.
   a. Thyroid studies - radio iodine uptake
      - P.B.I. (protein bound iodine)
      - B.M.R.
   b. Pancreas - glucose tolerance*
      - blood sugar
      - insulin tolerance test
      - 2 hour P.P.B.S.
      - Clinitest, Acetest*
      - 24 hour urinalysis*
10. Demonstrate nursing care of patients with therapy specifically related to endocrine system (Metabolic disorders):
   a. clinitest, acetest, testape
   b. insulin (determine if needed, dosage, and administer).
   c. determine if foods given to patient are acceptable within prescribed diets.
   d. notify dietitian if diabetic patient fails to eat.
11. Demonstrate teaching of patients and family:
   a. regarding relationship of diet, exercise and medication for diabetics.
   b. how to perform & read & record clinitest and acetest.
   c. how to prepare and ad inister medication.

* Be able to demonstrate nursing procedures.

TUCSON PUBLIC SCHOOLS
PROJECT HOP
Student Expenses -- Books

Books are in stock in the: Arizona Book store, 815 N. Park Avenue, at U of A main gate

The first eight (8) books above the double lines are for all students:

UNIT	UNIT SUBJECT	REFERENCE BOOKS (INFORMATION)	APPROXIMATE UNIT PRICE	TOTALS
1	Overview of Health Occupations	1. Horizons Unlimited	No Charge*	
		2. Personal & Vocational Relationships in P.N. by Carmen Ross, J. B. Lippincott, Phil., 1969	$ 3.70	
2	Human Relations for Health Workers	1. Understanding Human Behavior, A Guide for Hlth Wkrs. by Milliken; Pub: Delman Publ., Albany, NY	3.41	
3	Health Care Skills for Health Workers	1. Being A Nursing Aide; Publ: Robert J. Brady, 130 Que St., N.E., Wash., D.C. 20002	6.00	
4	Anatomy & Physiology for Health Workers	1. Structure & Function of the Body by Anthony; Publ: C. V. Mosby Company	4.25	
5	Nutrition & Diets for Health Workers	1. Basic Nutrition & Diet Therapy by Robinson; Publ: C. V. Mosby	3.95	
6	Asepsis for Health Workers	1. Introduction to Asepsis	No Charge*	
7	Medical Terminology for Health Workers	1. Cyclopedic Medical Dictionary by Taber; Publ: F. A. Davis Company	7.20	
8	Nursing Care I	1. A textbook for Nursing Assistants by Cherescavish; Publ: C. V. Mosby, St. Louis	8.25	
		TOTAL for Nurse Aide		$36.76

When you complete the Core, if you are going to be a P. N., you will need the following books (#14-19) We suggest you purchase these books after completing the Core.

14	Nursing Care of Children (Includes Growth & Development)	1. Foundations of Pediatric Nursing by Broadribb Publ: J. B. Loppincott	5.25	
15	Psychology Related to Nursing	1. Mental Health & Mental Illness by Johnston	3.90	
16	Community Health	1. Directory of Social Resources	No Charge*	
		2. Geriatric Nursing for Practical Nursing by Marion Keith Stevens; Publ: Saunders	3.50	
		3. Community Health Nursing Practice by Ruth Freeman; Publ: Saunders	8.00	
17	Nursing Care of Adults	1. Total Patient C re by Johnston; Publ: C. V. Mosby	8.20	
18	Nursing Care of Mothers & Newborns	1. Intro. to Maternal Nursing by Bethea; Publ: J. B. Lippencott	3.75	
19	Pharmacology	1. Med. and Math for The Nurse by Skelley; Publ: Delmar	7.00 (approx)	
20	Integration & Review	1. Mosby's Review of Practical Nursing	8.50	
		TOTAL for Practical Nurse		$48.10
		GRAND TOTAL		$84.86

*To be ordered by the Tucson Skill Center

TUCSON PUBLIC SCHOOLS
PROJECT HOP

EVALUATION OF EMPLOYMENT PERFORMANCE OF HOP GRADUATES

Please consider performance during period covered by this rating and show by (x) each of the aspects of performance included in the rating form. Please check if this evaluation is done after graduate has been employed:

3 months 6 months 12 months

Employee's Name_____
Employee's Job Title_____
Length of Time Employed_____
Evaluator's Name, Position_____

I. JOB KNOWLEDGE: Consider knowledge of work gained through experience, gained through experience, general education, specialized training, special sources of information.

Has a fund of knowledge beyond the requirements of the job and can apply this knowledge without being supervised or assisted.	Knows essentials and details thoroughly enough to perform without assistance.	Knows job well enough to perform with a small amount of assistance.	Limited understanding of job, requires considerable assistance.
☐	☐	☐	☐

II. QUALITY OF WORK: Consider accuracy, neatness, thoroughness and dependability of results, regardless of volume.

Exceptionally neat and accurate. Practically never necessary to question thoroughness.	Seldom necessary to check work. Gives inidcation of competency in all assignments.	Acceptable, usually neat, occasional errors or rejections.	Often unacceptable, frequent errors or rejections, frequently untidy.
☐	☐	☐	☐

III. QUANTITY OF WORK: Consider volume of work produced under routine day-to-day conditions. Disregard errors.

Output frequently above demands of job.	Satisfactory for demands of job.	Output occasionally below the requirements of the job.	Production usually below the job requirements.
☐	☐	☐	☐

IV. INITIATIVE: Consider the degree to which employee applies himself to his work.

Whenever regular work completed, finds extra work.	Keeps pace with regular flow of work.	Requires occasional prodding to keep up with regular duties.	Shirks work, puts it off, must be continuously prodded.
☐	☐	☐	☐

continued.

Appendix Q

EVALUATION OF EMPLOYMENT PERFORMANCE OF HOP GRADUATES - Page 2 Name of Employee_____

V. COOPERATION/ATTITUDE: Consider ability to get along with and help others.

Usually cooperative, works well with others in the group; voluntarily helps others.	Maintains satisfactory relationships; willing to help others when asked.	Has difficulty working with others. Fails to carry out orders.	Rejects suggestions. Has difficulty working with others.
☐	☐	☐	☐

VI. PATIENT RELATIONSHIPS

Maintains good rapport with patients, skilled in and practices very good patient care.	Provides adequate patient care with attention to patient needs and provides adequate assistance to the patient.	Has difficulty communicating with patient. Inattention to patient comforts.	Lacks skill in aiding and guiding patients.
☐	☐	☐	☐

VII. DEPENDABILITY: Is punctual and can be relied on to be working when and where assigned.

Satisfactory ☐ Unsatisfactory ☐ (Please comment)_____

VIII. APPEARANCE: The employee's uniform, grooming and personal habits are such that his appearance is appropriate for a person providing services to hospitalized people (or people needing health care services)

Satisfactory ☐ Unsatisfactory ☐ (Please comment)_____

ADDITIONAL COMMENTS:

Thank you for your time, cooperation in completing this form. Please return to Project HOP
P.O. Box 4040
Tucson, Arizona 85717

Appendix Q

DOROTHY LAWRENCE CORRELATIONS 6-1-72

	1 GATB-GEN	2 GATB-VERB	3 ABLE-Voc.	4 ABLE-READ	5 ABLE-ARITH	6 RACE	7 BSWMG.	8 Inst-K	9 Inst-St	10 Inst-Arr
N	47	47	47	47	47	47	47	47	47	47
MEAN	100.49	102.30	8.91	8.90	7.42	.62	.32	2.01	1.84	1.74
S.D.	13.62	13.36	.60	.44	1.28	.49	.47	.60	.56	.63
SEM	1.99	1.95	.09	.06	.19	.07	.07	.09	.08	.09
SUMX	4723.00	4808.00	418.80	418.10	348.90	29.00	15.00	94.50	86.50	82.00
VAR	185.60	178.47	.36	.19	1.65	.24	.22	.36	.32	.40
EX2	8537.74	8209.83	16.54	8.96	75.74	11.11	10.21	16.74	14.55	18.44
SUMX2	483149.00	500058.00	3748.32	3728.27	2665.77	29.00	15.00	206.75	173.75	161.50
1		.81	.21	.30	.65	.38	-.31	-.60	-.38	-.14
2			.26	.42	.59	.34	-.33	-.66	-.48	-.21
3				.62	.24	.22	.04	-.32	-.40	-.24
4					.30	.30	-.14	-.31	-.08	-.01
5						.53	-.49	-.54	-.31	-.18
6							-.87	-.50	-.27	-.18
7								.52	.24	.17
8									.79	.48
9										.57
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										

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DOROTHY LAWRENCE CORRELATIONS 6-1-72

	11 NLN - Gil.	12 NLN-Psych	13 NLN-NIP	14 Job Performance	15 State Board	16 Age	17 Hi Grade	18 Num/Hdbld	19 Dependents
N	47	47	47	47	47	47	47	47	47
MEAN	37.79	76.36	35.89	55.47	491.77	29.17	11.02	.70	2.00
S.D.	24.69	18.20	29.24	29.47	109.57	8.21	1.86	.46	1.35
SEM	3.60	2.65	4.27	4.30	15.98	1.20	.27	.07	.20
SUMX	1776.00	3589.00	1687.00	2607.10	23113.00	1371.00	518.00	33.00	94.00
VAR	609.56	331.11	855.14	868.64	12005.79	67.36	3.46	.21	1.83
EX2	28039.87	15230.85	39336.47	39957.48	552256.43	3098.64	158.98	9.83	84.00
UMX2	95150.00	289293.00	99889.00	184573.87	11919453.00	43091.00	5868.00	33.00	272.00
1	.43	.52	.55	.06	.50	-.15	.14	-.07	.12
2	.49	.59	.61	-.03	.56	.04	.05	-.02	.09
3	.23	.11	.19	.23	.43	.15	-.13	.01	.12
4	.33	.41	.28	.10	.50	-.11	-.01	-.12	-.16
5	.44	.50	.50	-.02	.55	-.09	.12	-.01	-.01
6	.41	.56	.58	.03	.54	-.04	.06	-.13	-.16
7	-.38	-.60	-.56	.11	-.58	.08	-.11	.15	.17
8	-.73	-.66	-.77	-.17	-.78	.18	-.08	.17	.01
9	-.54	-.37	-.57	-.23	-.66	-.13	.04	-.06	-.16
10	-.32	-.17	-.31	-.19	-.31	-.29	-.14	.11	-.04
11		.69	.69	.21	.81	-.04	.02	-.07	.07
12			.64	.16	.74	-.05	.03	.03	.00
13				.10	.74	-.12	.13	-.26	-.07
14					.17	.09	-.02	-.09	.03
15						.01	.01	-.00	-.01 Hdbld Brnd
16							-.07	.31	.27
17								-.37	-.35
18									.45
19									

729

Returns Completed for
Job Performance Only - Not Total Population

DOROTHY LAWRENCE CORRELATIONS 6-1-72

	1 GATB-Gen	2 GATB-Verbal	3 VOC ABLE	4 READ ABLE	5 ARITH ABLE	6 Race-White	7 B.Lingual	8 Inst.k	9 Instr-Skill	10 Instr-At
N	38	38	38	38	38	38	38	38	38	38
MEAN	101.26	102.74	8.97	8.92	7.43	.63	.34	1.96	1.79	1.70
S.D.	13.53	13.71	.24	.38	1.29	.49	.48	.60	.55	.60
SEM	2.19	2.22	.04	.06	.21	.08	.08	.10	.09	.10
SUMX	3848.00	3904.00	341.00	339.10	282.50	24.00	13.00	74.50	68.00	64.50
VAR	183.06	187.87	.06	.14	1.65	.24	.23	.36	.31	.36
EX2	6773.37	6951.37	2.09	5.25	61.19	8.84	8.55	13.19	11.32	13.27
SUMX2	396434.00	408036.00	3062.12	3031.27	2161.35	24.00	13.00	159.25	133.00	122.75
1	1.00	.82	.32	.32	.68	.35	-.38	-.62	-.40	-.06
2			.30	.43	.04	.32	-.36	-.64	-.48	-.18
3				.10	.37	.24	-.25	-.41	-.47	-.40
4					.29	.27	-.28	-.24	.16	.15
5						.43	-.50	-.54	-.32	-.14
6							-.94	-.47	-.24	-.16
7								.57	.33	.23
8									.79	.40
9										.52
10										
11										
12										
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16										
17										
18										
19										

730

DOROTHY LAWRENCE CORRELATIONS 6-1-72 returns completed for Job Performance Only - Not Total Population

	11 WIN-TAC	12 WIN-Bgd	13 WIN-MIP	14 Job Performance	15 State Bonus	16 Age	17 Hi Grade	18 Head/HsHld	19 Depend
N	38	38	38	38	38	38	38	38	38
MEAN	40.63	78.05	37.53	66.61	449.24	29.45	10.97	.68	1.97
S.D.	23.55	17.11	29.39	12.42	102.66	8.36	1.98	.47	1.37
SEM	3.82	2.78	4.77	2.01	16.65	1.36	.32	.08	.22
SUMX	1544.00	2966.00	1426.00	2607.10	18971.00	1119.00	417.00	26.00	75.00
VAR	554.40	292.65	863.66	154.22	10539.75	69.93	3.92	.22	1.86
EX2	20512.84	10327.89	31955.47	5706.23	389770.47	2587.39	144.97	8.21	68.97
SUMX2	63248.00	242332.00	85468.00	184573.87	9860993.00	35539.00	4721.00	26.00	217.00
1	.44	.62	.51	-.15	.57	-.11	.13	.11	.15
2	.47	.66	.57	-.26	.60	.06	.03	.15	.12
3	.24	.32	.17	.24	.40	.16	-.06	.26	.23
4	.32	.57	.25	-.09	.40	-.26	.06	-.09	-.23
5	.50	.55	.48	-.12	.61	-.04	.10	.07	.09
6	.42	.59	.56	+.07	.69	-.03	.02	-.05	-.10
7	-.44	-.59	-.62	-.03	-.73	.08	-.05	.13	.14
8	-.70	-.62	-.72	+.03	-.78	.20	-.05	.05	-.08
9	-.45	-.34	-.53	+.18	-.58	-.11	.08	-.16	-.33
10	-.22	-.04	-.19	+.14	-.19	-.47	-.11	.04	-.21
11		.65	.65	-.03	.80	-.08	-.01	.04	.21
12			.64	-.06	.81	-.04	-.03	.14	.12
13				-.03	.76	-.09	.11	-.15	.01
14					.12	.07	.08	-.05	.20
15						-.08	-.04	.07	.14
16							-.09	.32	.36
17								+.39	-.30
18									.53
19									

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ORIENTATION-WORK-STUDY-PLACEMENT PROGRAM.
INTERIM REPORT.

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ABSTRACT - SPECIFIC PROCEDURES ARE DETAILED FOR IMPLEMENTING 12 OBJECTIVES FOR A DISTRICT-WIDE EXEMPLARY PROGRAM IN CAREER EDUCATION AT THE ELEMENTARY AND SECONDARY GRADE LEVELS IN THIS FIRST ANNUAL PROJECT EVALUATION. PROGRAM GOALS INCLUDED DROPOUT PREVENTION, BROADENING OF OCCUPATIONAL AWARENESS AND CAREER OPPORTUNITIES FOR DISADVANTAGED YOUTH, INSERVICE TRAINING, COORDINATION OF EDUCATIONAL STAFF AND AGENCIES, DEVELOPMENT OF COOPERATIVE AND WORK EXPERIENCE PROGRAMS, AND JOB PLACEMENT. INDIVIDUALIZED STUDY PROGRAMS WERE PROVIDED AT A CAREER EXTENSION CENTER FOR 65 VOLUNTARILY-ENROLLED STUDENTS WHO WERE FORMER DROPOUTS, AS WELL AS OTHER YOUTH WHO USED THE GUIDANCE SERVICES. THE ROLE OF THE WORK-EXPERIENCE COORDINATOR, PARENTAL SUPPORT AND INVOLVEMENT, AND THE USE OF RESOURCE SPEAKERS, FIELD TRIPS, AND ROLE PLAYING WERE MAJOR EMPHASES IN THIS INTEGRATED CAREER EDUCATION PROGRAM. DIRECTED TOWARD THE DEVELOPMENT OF JOB SKILLS IN AN INNOVATIVE PROGRAM RELEVANT TO STUDENT NEEDS, THIS PROGRAM INCLUDED A THIRD-PARTY INTERIM EVALUATION FOR EACH OBJECTIVE. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR PROGRAM IMPROVEMENT ARE PRESENTED. PROJECT AND RESOURCE BIBLIOGRAPHIES AND OTHER RESOURCE MATERIALS ARE INCLUDED. (AG)

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INTERIM REPORT

Project No. V-161-177
Contract No. OEG-0-71-4776 (361)

Fairbanks North Star Borough School District Orientation-Work-Study-Placement Program

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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June 1972

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EDUCATION & WELFARE
OFFICE OF EDUCATION
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The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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June 30, 1972

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SUMMARY OF THE REPORT

A. Time Period Covered: The time period covered by this report is August 1, 1971 - June 30, 1972.

B. Goals and Objectives: The goals and objectives of the original proposal were the consistent reference points for the first year's activities. They are listed on page 12 of the Orientation-Work-Study-Placement program as it was presented to the United States Commissioner of Education under the provisions of Part D of the Vocational Education ammendments of 1968. They are as follows:

(1) To broaden occupational orientation at the elementary, junior high and high school levels.

(2) To broaden occupational aspirations and opportunities for youths, including those who have academic, socio, economic or other handicaps.

(3) To specifically identify dropouts, pinpoint causes for dropouts, plan preventative and remedial programs and promote implementation thereof.

(4) To identify and develop new opportunities for work experience and cooperative education in several occupational areas.

(5) To give more practical work experience to youth at various grade levels, and to have such experience characterized by learning by doing, significant responsibility for productive service to an employer, and recognition of educational values by awarding formal credit.

(6) To achieve a more realistic picture of job opportunities and utilize such information in training for employment.

(7) To develop employability of students.

(8) To develop the assumption of responsibility for placement of students at whatever level they leave the school system.

(9) To create bridges between school and earning a living for young people who are still in school, who have left school either by graduation or dropout, or who are in post-secondary programs of vocational preparation.

(10) To make greater use of existing school facilities, especially during the summer months.

(11) To conduct in-service training for district and other personnel to achieve the objectives of this proposal.

(12) To bring general and vocational educators, State Department of Education staff, teacher education staff, manpower and other agencies together in coordinated efforts to achieve the objectives of this proposal.

(13) To improve the status, scope and image of vocational-technical education.

C. Procedures Followed: In attaining the above objectives, several areas of activity superceded others this first year of operation. The staff felt that the essential priority was the infusion of career education into the district's total curriculum. However, the budget allowed for only one-half salary for someone to begin coordinating the career curriculum throughout the school district. Obviously this made for a rather slow beginning in this area. Later this coordinator resigned and for the last four months of the school year a full time consultant was hired. Two other staff members began to spend more time assisting her in gathering information and creating opportunities for dialogue with teachers, counselors and administrators in relation to the objectives set in the proposal. Several key resource people were identified in each school and with their help and input the infusion of the career concept into the school curriculum is receiving understanding and acceptance.

A building was rented and is referred to as the Career Extension Center. The career consultant had office space in this building and the various materials such as books and audio visual materials which were purchased were previewed and distributed throughout the district from the Center. These materials, along with those already existing in the district have been cataloged and the lists will be available to the various schools the first thing next fall.

Also at the Center there were offices for the director, work-experience coordinator and counselor. The rest of the building was used for approximately 65 students who worked two, later three, full time teachers on a totally individualized study program. These students had dropped out of the regular school program in the past, and on a voluntary basis enrolled at the Career Extension Center. This provided the nucleus for the second major priority, the Career Extension Center school. An extensive amount of personal and career guidance was provided-not only to those enrolled but to a number of other youth who felt a need for the kind of services we were able to provide. Every day of operation, young people dropped in either to ask to be enrolled in the school, to receive information, or seek special career or personal counseling. A number of parents called to seek help and guidance in dealing with their children who appeared completely turned off in the conventional school program.

The teachers worked almost exclusively with the enrolled Career Extension Center students. They provided individualized instruction and ceveloped courses corresponding to thise at the regular high school, but totally on the behavioral objective concept. Flow charts were kept on each student to show exactly his day to day progress. Though the students were aware that all work set up must be covered, and all objectives met, they did not object to the fact that earning credit in such a setting required considerable more work and perfection than they needed to produce for credit in previous school settings.

One of the most important aspects of the entire program was the work done by the work-experience coordinator. He helped to find meaningful on-the-job training or career exposure stations within the community for the students enrolled at the Career Extension Center, a number of other students referred to him by high school counselors, and those who just "dropped in". It was found that the businesses and various agencies in the community were very cooperative, and when the staff felt a student was ready for this kind of exposure, a position was found to most nearly fit the students interests, aptitude and academic work load.

D. Results; Accomplishments: Some of the general results of the school year were as follows:

(1) The career consultant was able to initiate a plan of career development in at least one sixth grade class in each elementary school with the concept spreading to other classrooms.

(2) The two junior high schools have initiated definite plans to integrate the career concept into the total school program. One school has a comprehensive self-appraisal and occupational exploration as an organized effort on the part of the counseling staff with teacher assistance. At the other junior high school there was a special in-service training for the counselors, a career club was established and a model exploratory resource center was developed in the library.

(3) A speakers list and an approved field trip list were developed. These were consistantly used by the teachers K - 12.

(4) On the high school level a course was implemented which has allowed students to receive high school credit for supervised on-the-job occupational exposure. Career packets for teachers within each department are in the process of being developed.

(5) An explanatory brochure was developed to explain the Orientation-Work-Study-Placement Program to the school district, the community and to be sent to other individuals outside of the community who would have a concern about career development.

(6) Staff members have been asked to speak to about twenty service clubs and organizations.

(7) A list of all career materials in the school district has been compiled. (Appendix D)

(8) Through the personal, individualized method of instruction at the Career Extension Center a few students received a regular high school diploma.

(9) Older students who had very few high school credits were assisted in their preparation for the High School Equivalency Test.

(10) Many young people and a few adults used the Career Extension Center for personal and career guidance services.

(11) An intensive thrust was made to give as many Vocational Interest Survey tests as possible - not only at the Center, but throughout the district.

(12) Part, and full time jobs were located for over one hundred students in the school district.

(13) Excellent rapport was established with the probation officers, the workers at the Drug Clinic, Health Clinic, Hillcrest Home for Boys, a home for girls, and the Jesus People who have made an impact on many youth in the community.

(14) There has been a large increase of membership in the Fairbanks Personnel and Guidance Association due to the leadership of three staff members of the Career Extension Center.

(15) Staff members spoke to all of the student teachers at the University and later worked with some individually.

E. Evaluation: In addition to the third party evaluation report which was prepared for us by Dr. Allen Lee, and follows later in this report, our immediate concerns led us to initiate several types of evaluations of our own throughout the year. These evaluation studies are as follows:

(1) A staff evaluation report was designed and executed by our career consultant.

(2) The parents of the students attending the Career Extension Center school initiated a survey to evaluate the merits of the school itself.

(3) The students attending the Career Extension Center school were asked to evaluate their past school experiences.

(4) The district's Department of Research, Planning and Federal Programs is helping the Career Extension Center staff with a study of high school drop-outs not attending the Center. The study includes the students' evaluation of their past school experiences and the curriculum offered.

(5) A research assistant working through the State Human Development Resource Center is using an instrument developed by a staff member of the Career Extension Center, to survey the businesses in the community. She is doing an occupational survey to determine manpower and training needs.

(6) The teachers at the Career Extension Center set up all courses on behavioral objective basis. This produces a situation where daily measurable evaluations must be made.

The results, or at least the latest partial results of these on going evaluations, are presented later in this report.

F. Conclusions and Recommendations:

(1) The career consultant staff should be increased.

(2) The bibliography materials in the school district should be categorized into explanatory form for greater usability.

(3) More intermediate career development materials are needed.

(4) The audio-misual materials prepared by students of local businesses and community resources is a very successful program. Much more needs to be done in this area.

(5) The integration of the career materials into the present school program would be much more successful if the total school curriculum would be analyzed for developmental consistency.

(6) An on-going career profile for individual students should begin in the intermediate grades.

(7) In-service training and workshops for the staff must be an on going priority.

(8) Funds for on-the-job training stations would increase the work exposure opportunities for students.

(9) More flexibility is needed in scheduling in order to tailor-make a suitable program for students, especially the potential dropout.

(10) Night school and innovative summer programs could create greater student interest and participation.

(11) There should be more effort toward cooperation and communication between the University of Alaska staff and the public school district.

(12) The present survey of occupational and training needs in the Fairbanks area should be continued.

(13) Provision should be made for transporting students to and from job training stations.

(14) Consistent, continued research should be carried out to find causes and remedies for school dropouts.

(15) The present school counselors should be freed from clerical duties in order to perform the student personnel services for which they were trained and hired.

BODY OF THE REPORT

A. Problem area to which the project was directed: Simply stated the problem area is the long established fact that most students leave our school system without any skills that will be useful or salable to an

employer. This fact is as true for the high school graduate as for the drop out. This is not just a concern at the secondary level, but at the elementary educational system as well.

In 1968, a follow up study of Lathrop High School graduates and dropouts, grades nine through twelve, was conducted under a grant from the United States Office of Education, Department of Health, Education and Welfare [School Curriculum: A Follow-up Study of Lathrop High School Graduates and Dropouts by Smail, Mills, Koponen]. It was found that 13.89% of the total enrollment over a period of the previous six years had physically dropped out of high school. This year long study, which included extensive interviews, recommended very strongly that the course content must show a relationship to every day living in order to keep the potential drop-out interested. The students wanted a more relevant, hands on type of experience with some obvious immediate rewards. In February, 1972, a follow up was done on this same study and the drop out rate for the 1971-72 school year of the students grades 10-12 were being projected at 18.02% - a 4.13% increase. These latest statistics are provided by the Department of Research, Planning and Federal Programs of the Fairbanks North Star Borough School District. At the same time it was found that interest in the vocational courses is waning,only 7% of the student body is presently enrolled in some vocational courses. The 1969 graduating class had about 19% of their students who took vocational training sometime during their high school career.

Although approximately 50% of the high school graduates enroll in college the following fall, the registrars office at the university, where most of our students attend, reports that 40% of the freshman class either drops out during the school year or fails to report back the next fall.

According to a study by three Lathrop High School counselors in the 1969-70 school term, it was found that 8% of the students who were still enrolled at the end of the school year had failed all academic subjects even though standardized test scores usually showed these students to have average ability. In 1970, one of the school counselors conducted a survey of the senior class. One of the questions was, "What kind of subjects do you feel Lathrop should offer?" 19% felt they would have liked more vocational training while another 30% stated thry would like more "meaningful", "down to earth", "nonbook" type subjects which in translation could mean they would like to have had courses more relevant to every day life.

In order to prepare for the writing of the Orientation-Work-Study-Placement proposal a great amount of thought, preparation, and research was conducted. The object was to introduce into this school district a more relevant, career oriented program. Two major thrusts were chosen: (1) initiate inovative methods in career education into the total district curriculum. (2) Provide an exemplary high school, in this case made up of former school dropouts, in which individual academic work correlates with on-the-job training. Visits were made to the S.A.V.E. program in Anchorage which worked with potential dropouts identified by school counselors. This program uses the 1/2 day academic and 1/2 day

work emphasis. A visit was also made to Project Interchange in Seattle which used similar methods to the S.A.V.E. program. A contractual program at Ballard High School in Seattle was carefully noted. Here students worked with their teachers in developing a course of study and then signed a contract which describes the work they will do to receive credit. Whenever needed, the teachers would be available to help.

Two resource books were used to explain causes for students dropping out. These books are:

Profile of the School Dropout
Edited by Daniel Schreiber
Random House, New York, 1967

The Dropout
by Lucins F. Cervantes
Ann Arbor University of Michigan Press, 1966

From these books, as well as from one of our own studies listed later, we can see there are other dimensions in addition to a meaningful curriculum that must be considered when trying to help the student. A myriad of personal, emotional and social needs require service which can best be provided by well trained, understanding counselors.

Since this beginning of the project, a number of our staff members have had the opportunity to visit other programs in Portland, Juneau, Seattle, Anchorage and Kenai.

The Smail, Mills, Koponen report, mentioned above, however, has had a strong impact upon the direction our staff has chosen to take since it was the most extensive study of this nature ever done in this district concerned with our own unique transient population plus a large percentage of native students. With elaborate detail and intensive seeking out of past students and their opinions, the researchers came up with twenty-five specific recommendations that we consider vital to our program committment. From these recommendations, plus an overview of national concerns, we feel confident that our exemplary program is a beginning to meet the needs of many of our youth.

B. Goals and objectives of the project: In order to be concrete and measureable, broad goals and objectives of our proposal have been broken down into specific behavorial objectives that appeared feasible for the first year.

Objective I: To broaden occupational orientation at the elementary, junior high and high school level.
Objective 2: To broaden occupational aspirations and opportunities for youths including those who have academic, socio-economic or other handicaps.
(These two objectives have been combined due to overlap in specific objectives.)

(a) Through building principals, a career education resource person will be selected in each school and those persons will

receive initial and on-going in-service training related to the goals of the program and career education activities.

(b) The career consultant will visit each school at least once per week to develop programs, deliver materials and generally maintain a laison with resource personnel.

(c) Arrange field trips and guest speakers as demanded by building resource personnel.

(d) Compile an annotated index of related books and audio-visual material in the school district and make available to classroom teachers.

(e) Compile a list of career field trips and speakers to cover all career clusters and make available to classroom teachers.

(f) Order and evaluate all career education programs that become available.

(g) Meet with all school librarians to implement the expansion of career materials in school libraries and to develop a career center in each library.

(h) Order all appropriate free materials listed in the Career Index published by Chronicle Guidance.

(i) Order career related materials (poster series, books, films, career kits and tests) and distribute within the schools. (Approximately $2,000)

(j) Keep a log of activities and materials destributed.

(k) Meet with all junior high and high school counselors at least once per month to discuss activities relating to career education.

(l) Meet with high school department heads at least two times during the year to discuss career education activities.

(m) Assist in establishing a summer workshop in career education for teachers within the district.

(n) Establish a 1/2 credit course in career inquiry for Career Extension Center students with a minimum of twenty students successfully completing the course requirements. (Later it was decided that all students would be taking this course).

(o) Establish a one to three credit course at the high school level called "Careers Exposure" which will allow at least twenty students to utilize community resources for career orientation on an "out of school" basis.

(p) Meet with the superintendent, secondary school coordinator and elementary school coordinator at least six times during the year to review career development program.

(q) Assist junior high counselors in establishing and maintainint a nine week occupational unit in their respective schools.

(r) Provide all high school teachers with career related material compiled individually for their specific subject matter areas.

(s) Provide each department at the secondary level with an S.R.A. occupational kit.

(t) Develop a comprehensive testing program (including interest, aptitude, ability, achievement and personality) and career profile chart for Career Extension Center students and introduce the results to secondary school counselors.

(u) Initiate a career club in each of the junior high schools that will include at least twenty students meeting weekly.

(v) Meet with University of Alaska personnel at least two times throughout the year to provide career education input into the university systems teacher training program.

OBJECTIVE 3: To specifically identify dropouts, pinpoint causes for dropouts, plan preventative and remedial programs and promote implementation thereof.

(a) The Fairbanks Department of Research, Planning and Federal Programs will continue studying and researching the dropout problem using the same format used in the Smail study [School Curriculum: A Follow up on Lathrop High School Drop Outs.]

(b) The staff at the Career Extension Center will develop an interview sheet that covers all aspects of the student's past attitudes toward school.

(c) A committee will be established to study the research materials developed which will help pinpoint potential dropouts and devise methods for remedial work as well as more hands on career related activities for the elementary and junior high school students.

(d) High school counselors will interview and gather data on every student that leaves school during the school year. This information will be compiled each spring and presented to the school board with recommended curricular modifications.

(e) A research aid will be assigned to assist Career Extension Center staff in gathering and compiling data necessary in determining causative factors regarding recent dropouts.

OBJECTIVE 4: To identify and develop new opportunities for work experience and cooperative education in several occupational areas.

(a) The director and/or other staff members will speak to fifteen or more different organizations and clubs to explain the Orientation-Work-Study Program and solicit a response in terms of jobs, questions, and public relations.

(b) Evaluative tools, such as value and interest surveys as well as personality inventories and aptitude tests, will be made a part of every students profile for the purpose of pointing out career areas the student has not considered before. These services are to be offered to all secondary students as well.

(c) The work-experience coordinator will maintain the necessary contact to develop cooperative training and exposure settings for high school students with the following entities and others as deemed appropriate:

Adult Vocational Education
University of Alaska
Apprenticeship Outreach Program
State, Federal and local agencies
Office of Vocational Rehabilitation
Hospital Nurses Aid Program

OBJECTIVE 5: To give more practical work experience to youth at the various grade levels, and to have such experience characterized by learning by doing, significant responsibility for productive work to an employer and recognition of educational values by awarding credit.

(a) Provide part-time employment for all students within the Work-Study-Orientation Placement Program that are working toward a high school diploma or equivalency test.

(b) Periodically modify employment of students enrolled in the Career Extension Center as necessary to more completely meet individual vocational needs as measured by:

(1) past and present employment success
(2) interest and aptitude testing
(3) Educational aspirations

(c) Conduct a meeting of all Career Extension Center staff members each week to discuss educational and occupational growth of each student within the exemplary program.

(d) Require each student within the Career Extension Center to complete a one-half credit course termed Career Inquiry which will focus on job attitude as well as the mechanical aspects of successful employment.

(e) High school elective credit will be awarded to all students fullfilling work-experience requirements on the basis of Alaska State Vocational Department standards.

OBJECTIVE 6: To achieve a more realistic picture of job opportunities and to utilize such information in training for employment.

(a) Make contact with all employing businesses and agencies in the Fairbanks area in an attempt to seek student employment and survey community job needs.

(b) Maintain weekly contact with staff members of the Alaska State Employment Office.

(c) Attend meetings of the Fairbanks Ancillary Manpower Board.

(d) Utilize personnel from the school district's research and planning department in completing a community survey regarding local employment picture and training target population.

(e) Maintain constant communication with all youth employment programs:

High School Co-op Programs
Neighborhood Youth Corps
Youth Opportunity Corps
Kawainis Youth Employment Program
Native Center Employment Program
N.A.A.C.P. Employment Service
Manpower Development Program

OBJECTIVE 7: To develop employability of students.

(a) Every student at the Career Extension Center will complete a one-half credit course, "Career Inquiry".

(b) Meet with parents of Career Extension Center students on a monthly basis to discuss the progress students have made and to share ideas on "generation gap" communications. This is to help bring about behavior changes which would transfer to job and school activities.

(c) Each student at the Career Extension Center school will increase his reading by one grade level by the end of the school year.

(d) A curriculum will be devised for each student which will meet the district's graduation requirements as well as relate the subjects to the career goals the students might have. Every course plan will be written in behavioral objective format.

(e) The teachers will help those students preparing for the G.E.D. to pass the test with as high scores as possible.

(f) The counselor will make personal contact with newly enrolled students at the Career Extension Center school. Those students with special problems will be seen on a regular schedule.

(g) All students who have not developed a successful employment record will be placed in a controlled career exposure setting until satisfactory work habits are developed.

OBJECTIVE 8: To develop assumption of responsibility for placement of students at whatever level they leave the school system.

(a) A continuing placement service will be available to past graduates of the Career Extension Center school as well as testing and career counseling services.

(b) All students unable to complete high school graduation requirements or equivalency testing will be placed in appropriate trade school settings or employment.

OBJECTIVE 9: To create bridges between school and earning a living for young people still in school, or who have left school either by graduation or dropout, or who are in post-secondary programs of vocational preparation.

(a) Meet with University of Alaska personnel at least two times throughout the year to provide career education input into the University system's teacher training program.

(b) The director and/or other staff members will speak to fifteen or more different organizations and clubs to explain the Orientation-Work-Study Program and solicit a response in terms of jobs, questions, and public relations.

(c) The work-experience coordinator will maintain the necessary contact to develop cooperative training and exposure settings for high school students with the following entities and others as deemed appropriate:

Adult Bocational Education
University of Alaska
Apprenticeship Outreach Program
State, Federal and local agencies
Office of Vocational Rehabilitation
Hospital Nurses Aid Program

(d) Make contact with all employing businesses and agencies in the Fairbanks area in an attempt to seek student employment and survey community job needs.

(e) Maintain weekly contact with staff members of the Alaska State Employment Office.

(f) Attend meetings of the Fairbanks Ancillary Manpower Board.

(g) Utilize personnel from the school district's research and planning department in completing a survey regarding local employment picture and training target population.

(h) A Career Extension Center staff member will attend or request meeting minutes of all regular meetings of the following agencies or committees:

Fairbanks Interagency Council

Fairbanks Ancillary Manpower Board
Fairbanks Counselors Association
Fairbanks Vocational Education Advisory Board
Fairbanks Chamber of Commerce

(i) Director and staff from all agencies will be invited to visit the Career Extension Center.

(j) A minimum of one meeting each month will be held with the districts four work-experience coordinators to insure synchronization of work experiences and opportunities.

OBJECTIVE 10: To make greater use of existing school facilities, especially during the summer months.

(a) The Career Extension Center school will be open for at least one month of the normal school summer vacation.

(b) The Career Extension Center school will be open for at least four evenings per week throughout the school year.

(c) At least one third of the regular Career Extension Center students will spend one period or more in academic or vocational courses within the high school or vocational education programs during the school year.

OBJECTIVE 11: To conduct in-service training for district and other personnel to achieve the objectives of this proposal.

(a) A career education resource person from each school in the district will attend at least one career education workshop during the school year.

(b) A career education summer workshop will be made available for interested teachers.

(c) The career consultant will meet with career education resource personnel in each school at least once each week.

OBJECTIVE 12: To bring educators, vocational and general, State Department of Education staff, teacher education staff, manpower and other agencies together in coordinated efforts to achieve the objectives of this proposal.

(a) A Career Extension Center staff member will attend or request meeting minutes of all regular meetings of the following agencies or committees:

Fairbanks Interagency Council
Fairbanks Ancillary Manpower Board
Fairbanks Counselors Association
Fairbanks Vocational Education Advisory Board
Fairbanks Chamber of Commerce

(b) Director and staff from all agencies will be invited to visit the Career Extension Center.

(c) A minimum of one meeting each month will be held with the districts four work-experience coordinators to insure synchronization of work experiences and opportunities.

(d) The director and/or other staff members will speak to fifteen or more different organizations and clubs to explain the Orientation-Work-Study-Placement Program and solicit a response in terms of jobs, questions and public relations.

(e) Career Extension Center staff members will present the Orientation-Work-Study-Placement Program to the district school board at least once during the school year.

C. Description of the general project design and the procedures followed, including information on the student population, instructional staff and on the methods, materials, instruments and techniques used.

Underlying the entire concept of the Orientation-Work-Study-Placement program is the unified philosophy of the present staff that is engaged with the responsibility and privilege of serving in it. One could almost state it as a creed: We believe that a useful, meaningful education is the right of every young person in our community and it is the task of the educators to provide as many opportunities and learning alternatives as is possible. Since learning does not cease as the student leaves the school building, he must be aware of and have access to the varied and important information that the community has to offer.

It is understood that basic to learning is the need for the students (and our co-workers) to be treated with trust, respect and dignity.

Each student is to be given the opportunity to find meaning and direction in his search for identity. This is done by helping him develop the knowledge and skills needed to make sense out of his experiences -- today and in the future.

Youth needs a place in society. He should feel needed and wanted, and that he is pulling his weight as he becomes a responsible member of his community.

In this educational plan, much of the responsibility for learning, for seeking out, for probing is put on the student himself. The staff sets the tone, creates as varied amount of experiences as possible, and assists and guides.

For the reader to understand the Fairbanks North Star Borough School District - the various schools are listed below:

Lathrop High School
Main Junior High School

Ryan Junior High School
Adler Elementary
Barnette Elementary
Birch Elementary (Special Education)
Denali Elementary
Hunter Elementary
Joy Elementary
Nordale Elementary
North Pole Elementary
Salcha Elementary ——— Smaller schools in out-
Two Rivers Elementary lying areas of the Borough
University Park Elementary

The career development coordinator was hired September 2nd on a half-time basis. She began her work by looking into all the career materials available in the school district - the Curriculum Service Center, school libraries, teachers, classrooms, counselors offices and the Fairbanks North Star Borough Library. All of these materials were later cataloged. She ordered free materials, career development guides and programs that have been used in other communities and states. She and the director met several times with the junior and senior high counselors to explain the total function of the Orientation-Work-Study-Placement Program and ways in which the Career Extension Center could assist them disseminate materials to the teachers and their counselees. They also spoke to the entire faculty of the high school and one of the junior high schools. It was found, however, that communication had to be an on-going, intensified effort for the program was so new and much groundwork needed to be done if the career curriculum and career guidance was to have meaning and direction. Later the work-experience coordinator spent a considerable amount of time on the secondary level. The approach used will described more fully below.

The career consultant conferred regularly with the elementary curriculum coordinator and assistant superintendent as to the opportune time to talk to the elementary school principals about the concept of integrating the career development program into the regular classroom experiences. This presentation took place in December, 1971, when the Orientation-Work-Study-Placement Program objectives were presented verbally and in writing, and the various types of media available in the district were displayed. An administrative decision was also made that in the elementary schools the principals should choose one key person, a sixth grade teacher, to be a contact through whom the career program concept would be introduced. The Philadelphia Plan, published by the school district of Philadelphia, was used as a basis from which to work. (appendix C8-C11) Some of the key people adapted very quickly and established very interesting ideas of their own. They were consistently requesting more materials and help with field trips, speakers or "Career Projects". Their enthusiasm spread to other teachers in the buildings, and it was an inspiring experience to keep up with them.

In a few schools the coordinator found she needed to visit and work much harder to keep the spark alive and the program moving along.

On January 7, 1972, the part-time consultant resigned and on January 25, 1972, a full time consultant took over. Basically she worked along the same lines as the previous coordinator. The Philadelphia Plan was supplemented with new and varied materials. A speakers list and a field trip list were devised and the cataloging was completed. (appendices B1-B3) She was able to work long enough to find a great need for coordination which will be a priority for next year. As the ideas began to catch on - it was found that the many activities were beginning to get in each other's way (example: too many field trips to the same location). Though the Orientation-Work-Study-Placement Program staff was pleased to see the enthusiasm grow, it then had to be coordinated very carefully so each student would have a growing experience through the school years - rather than one of repetition or deletions. These needs led to the development of an overall career education plan which requires exploration in depth this coming year.

Through struggling to find direction consistant with district's normal mode of operation, integrated elements of career education began to everge as part of the general curriculum. It was found that the first five or six years of education differs little from former efforts except that simultaneously with general learning, the student explores the world of work through a wide lateral study of occupational clusters. In the middle grades, career education becomes more individualized and the student more intensely explores the occupations within the clusters he has shown the greatest interest. Through the tenth and eleventh grades the student will then develop basic entry skills that will meet his needs should the option of leaving school prior to completion of the twelfth grade be exercised. Should the student graduate from high school, employment or entrance to a post-secondary institution will be the appropriate alternative according to need, aptitudes and interests. Skilled career consultants and counselors are a key aspect of this concept. The student will receive extensive assistance in developing his particular interests and abilities and tying these to potential careers.

The above described program will be a functioning part of the district's curriculum in the insuing school year. Specific activities and recommendations for implementation are to be found later in the text.

On the junior high level career education activities were introduced via several different vehicles. Initially the counselors at the two junior high schools received in-service training both formally and informally regarding career education techniques for counseling and classroom activities. From this, a counselor in each school was designated to act as a resource or contact person. In one school a structured nine week self-assessment and occupational exploration course was set up geared to reach three hundred seventh and eighth graders. The Self Appraisal and Assessment Structure (astrow) was the assessment tool and the SRA occupation kit was used as a springboard for exploration to be followed up with research within the students regular classes. A career education resource center was set up in both junior high schools with the assistance of the librarians. Math, business, speech and science courses were all introduced to career education through integrated activities designed by the career consultant and implemented by

the respective classroom teachers. A career club was established in each school which provided students with extensive career exposure as well as providing an excellent sounding board for new ideas.

The Ohio Interest Inventory test was introduced to the counselors and administered to approximately seventy-five students who had specifically requested information about themselves. This tool proved effective and will be used extensively next year.

The concept of career speakers and field trips was readily developed in the junior high schools and utilized heavily the second semester.

In the high school, the goal was to modify the curriculum so that career exposure cut all the way across the student's educational experience. Through the counselors and department heads, a plan was designed to provide each teacher in the high school with in-service training in methods relating the world of work to each subject area taught in the school. This entailed departmental material designed for each of the ten departments represented. This was in turn broken down into individual teacher packets relating directly to the specific subject areas for which each teacher was responsible. Each department would, therefore, act as a departmental resource area providing supportive material for the teachers it serves. Individualized classroom projects, speaker lists, field trip lists, career exploration kits and student developed printed and audio-visual material would be included within the packets. This project has had a good beginning, but needs to be completed next year.

Another area of high school career development effort has been in supplying materials for a career center in the school's proposed student lounge. Aside from a large amount of general career information such as brochures, kits, posters, etc., a variety of career films were shown during the course of the year as were many sound film loop series introduced.

As in the other schools, field trips and speaker assistance was provided at teacher request by the career consultant from the Work-Study-Orientation program.

Career Education input was also applied in the district's one high school as a supplement to the curriculum discribed above in an effort to integrate the career concept into the existing field study. This took the form of a course termed "Careers Exposure". (appendix C15 - C17)

Basically, a student enrolled in Careers Exposure will spend two to three hours in structured activities in a business or agency within the community. Students will receive elective high school credit for this on the basis of one-half (1/2) elective credit per 100 hours at the exposure station. A maximum of three credits can be earned in Careers Exposure in the high school educational program. Since the major objective of this activity is to provide intensive exposure to a variety of careers, the length of time at any one station need not be extensive. The time

at any single exposure station will vary according to circumstances but will not exceed 300 hours. Upon reaching that limit, the student will be placed in another exposure station, fed back into the regular curriculum or the existing station will be converted to a training position subject to a new contract.

Students in grades 9-12 will be eligible for Careers Exposure. The selection or determination of students most applicable for these activities will be the responsibility of the counselors. Counselors, through their contact with the students, will also be instrumental in determining the particular career exposure most benificial in each case. The actual placement in business or agency and the periodic follow-up necessary will be the duty of the career consultant assigned to that school. The consultant will also be responsible for the necessary paperwork and arrangement of the contractual agreement between school, student and employer. (appendix B8) The contract will contain general stipulations common to all students taking Careers Exposure as well as a list of the bahavioral objectives specifically applicable to each placement. These objectives will be tailored according to student needs and the opportunities available in the exposure station.

The career consultant devised a questionaire, presented at a principals meeting, to be distributed to all of the teachers. (appendix B16) Though the small number of responses was a disappointment we were able to learn a few facts.

The career orientation activities, units and techniques most often used are listed below in order of frequency:

Community Helpers
Discussion of different careers
Films of various occupations
Family Unit Study
Field trips
Illustrations, Stories
Art in Action
Discussion of school personnel jobs, interdependence
Model City Planning
Newspaper Contact
Role Playing of Occupations

The career orientation activities, units or techniques listed most often as desirable for next year were actual exposure to unskilled possible future jobs. This was expecially important to the special education teachers.

During the school year the Orientation-Work-Study-Placement Program travel budget allowed for several trips to other programs and conferences. These proved invaluable experiences as we were able to view existing programs and learn from them.

In August, 1971, four staff members took part in the Alaska Vocational Association Conference.

Thirteen district staff members attended a one day Career Orientation Conference in Anchorage. Three staff members took part in the career curriculum section at the state teachers' conference.

One teacher of the Career Extension Center school visited a similar school established in Juneay, and another teacher visited the one on Anchorage.

The director had the opportunity to attend the American Vocational Association in Portland as well as visit career oriented programs in the Portland and Seattle areas.

The director of elementary curriculum spent several days in Seattle studying the career program developed there, and the assistant superintendent attended a conference for administrators in the area of the career curriculum as it is being developed nationwide.

The Career Extension Center School: When the school term began we felt an urgency to get the school for dropouts started as fast as possible. Students who had dropped out of school the year before and those who had failed all academic subjects, were sent a note of invitation to discuss their continuing their education under the guidance of the staff at the Center. No one was forced or coerced in any way to attend the school The program was explained and they decided whether they wished to enroll. Though we felt fifty students should be our limit, we often had over sixty-five on our rolls and a long waiting list.

Sime students desited to work for regular high school credirs while others felt because they were so far behand and getting toward their eighteenth birthday, they would do best by studying for their High School Equivalency test.

All school work was completely individualized. The general procedure was for the student to see the director for an interview. If the student was accepted - he completed an enrollment and was then introduced to the counselor. The counselor spent some time with the student, on a "get aquainted" basis, and then introduced the student to the work-experience coordinator. The work-experience coordinator discussed the student's job status and his past experiences and aspirations. At this point the student was introduced to the teachers who started him on a Career Inquiry course. (appendix C1-C2) While the student was working on this, the staff had the opportunity to obtain and review the student's transcripts and past test scores. It also gave them an opportunity to observe the student's work habits and ability to work on a very structured course in a non-structured setting. The entire concept of learning at the center is that each student is totally responsible for his own time schedule and attendance. However, each course outline is set up with a definite sist of behavioral objectives which must be met before any credit can be given. Each objective is worth a determined number of units and an individual frow chart is kept in each student's folder which allows him to see his progress and the amount of work needed to complete his work.

The counselor worked on a regular basis with the students. He gave at

least one, and usually two vocational interest inventories to every student. This experience is, in a sense, a structured counseling situation where the student's interests, needs and abilities are discussed. The interest inventories furnished the student with a profile that for many brought to focus some ideas that in the past may have been hazy or nonexistent. They were helpful to the teachers who utilized this information for planning individualized courses of study in line with these interests.

These interest inventories were especially helpful to the work-experience coordinator. Through interpretation of the test results with the student and counselor, past work experience, abilities and interests were tied together so that the most meaningful exposure or training situation could be applied to each individual. The counselor and work-experience coordinator worked very closely in attempting to make on-the-job experience relate to academic and social growth.

This year three different interest inventories were used. They included the Strong Vocational Interest Blank, The Kuder Personal Preference - Vocational, and the Ohio Vocational Interest Survey.

To date no aptitude testing has been done at the Career Extension Center school. Many have attended other schools within the district where the Differential Aptitude test is given, generally in the ninth or tenth grades. When necessary students were referred to the State Manpower Center for GATB testing.

If it seemed necessary, an Individual Otis Quick Scoring Mental Ability test was administered. When indicated for diagnosis of particular problem areas, a Weschler individual intelligence test was administered.

The Wide Range Achievement test (WRAT) was used for some students as it yields percentile scores and grade level placement in reading, math, and spelling. Toward the end of the year we became acquainted with the Peabody Individual Achievement Test (PIAT) which is considerably more comprehensive and will probably replace the WRAT next year.

Personality testing has not been routinely given this year. Next year the 16PF will be a part of the standard battery given.

All of this testing is to help the student understand himself better in relation to career objectives and goals, as well as to give the staff the information necessary to help the student grow in self-understanding. However, the testing is done on a voluntary basis.

An individual profile sheet developed by our counselor quickly shows the entire testing results that have been accumulated for the student. (appendix B14)

After extensive counseling, it was determined whether the student was ready for a specific training station or whether a variety of occupational exposure was necessary. If training in a specific area was in order, the work-experience coordinator would make the placement in a local business or agency on a half-time basis. In cases where an exposure setting was

required, a business or industry was choosen that best represented the occupational cluster or clusters most appropriate for the student and placement would be made on the basis of exposing the student to all relevant careers within that facility. (appendix B9-B10) An emphasis was placed upon periodically modifying both training and exposure settings when a student's needs changed or a more appropriate setting appeared.

Credit was awarded on the basis of Alaska State Vocational Department Standards of half-credit per one hundred hours of training or exposure with a maximum of one and a half credit each semester. (appendix B6) Students were under a contracted agreement to receive credit for work wxperience. Training positions required a general contract. (appendix B7)

While the exposure station agreements were individualized to the extent of developing specific behavioral objectives for each situation. (appendix B8)

A significant proportion of the work-experience coordinator's time was spent in meeting with individuals, agencies, and groups within the area in efforts designed to gather support for the program and to tap community resources for training stations. Close contact was also maintained with the school district's three work-experience coordinators who operated out of the regular high school.

The work-experience coordinator also provided a limited employment service for Lathrop High School students (upon recommendation of the counselor) when part-time employment appeared necessary to supplement their curriculum. Students normally fell into two catagories. Those who experienced a great deal of trouble in academic work and were failing and those exceptional students who received all they could from a particular phase of the high school curriculum and would most benefit from actual work experience. This service led to the development of a Careers Exposure course that was implemented into the district's high school curriculum late in the 1971-72 academic year. That action necessitated in-service training for high school and senior high counselors and assistance in obtaining the exposure stations for the students that utilized careers exposure. (appendix C15 - C16)

One additional function of the work-experience coordinator requiring a significant amount of time was gathering survey data of employment and training needs in the Fairbanks area. The federally funded P.E.P. program provided a part-time research assistant to aid in this effort. (appendix B15)

Several additional peripheral areas touched upon by the work-experience coordinator will be evidenced in the results and conclusions portions of this report.

Through the school year, the Career Extension Center school enrolled approximately 128 students. The breakdown of these students at the end of the year is as follows:

64 remained on our active roll list
29 took the G.E.D. test and passed ti
2 are in the process of taking the G.E.D. test. They each have one part to complete
4 graduated as regular high school students
5 quit to work full time
1 married, expecting a child
3 transferred to Lathrop High School second semester, (one graduated this spring)
1 took G.E.D. test several times but could not pass it. She then took a job full time
2 ran away
1 left town because his mother felt police harassed him too much
1 unknown
4 transferred to schools in the states
1 has been in hospital three times, will try to take G.E.D.test when feeling better
1 drug addict, transferred to Odyssey House in New York
1 in prison
1 in the navy
7 disinterested in any program we were able to suggest or devise

Follow up on the twenty-nine students who passed the G.E.D. test show the following.

3 traveling
13 working full time
4 military
1 University of Alaska
3 apprenticeships
2 part-time work, part-time University of Alaska
1 remaining in school to work on credits
2 not working or engaged in any activities

Eleven one semester English courses, six social studies and one physical education (swimming) were developed on the concept of behavioral objectives. In this report we are including the Career Inquiry Course which was totally unique to the Career Extension Center school. Its general theme, outline and list of behavioral objectives will show the general format of each course offered. (appendix C1-C2)

The students who enrolled were asked to fill out a questionaire about themselves. (appendix B17) From the questionaire we learned the following facts:

58% live with their natural parents
8% live with foster parents
9% live independent of adult supervision or married
15% live with one parent and sometimes with a step-parent

When those who do not live at home were asked why they left, the most frequest answer was, "too much hassling" and the second reason given was that the parents were getting a divorce. Some of the other questions were:

(1) Is this your father's first marriage? 65% answered yes
(2) Is this your mother's first marriage? 52% answered yes
(3) Who is the most influential person in your life? The most frequent answer was mother, especially for the boys. The second most frequent answer was father.
(4) Do you own a car? 28% answered yes
(5) Have you ever run away from home? 78% answered yes
(6) In ten years what do you hope to be doing? 36% indicated employment. 64% indicated something other than employment.
(7) Have you ever been arrested? 45% answered yes
(8) In what grade, or what age did you begin to lose interest in school? Grades 7 - 10 = 80% Grades 1 - 6 = 20%
(9) Was there any particular thing that caused you to dislike school? The answers given below are listed in the order of frequency checked by the students. Students could check more than one.
(1) Too boring
(2) Skipped too often
(3) & (4) Didn't like the teachers - didn't like the rules.
(5) Frustrated with school in general.
(6) Frustrations and problems at home
(7) Not learning anything
(8) Just a bad feeling
(9) Needed to work for money
(10) Teachers too far ahead and moving too fast.
(11) Felt "out of place"
(12)&(13) Too hard - can't read very well
(14) Pregnant
(15)&(16) Married - felt "dumb"

In a questionaire prepared and carried out by the parents of the students at the Career Extension Center school (appendix B11-13) it was found that the enthusiasm of the parents was even greater than the staff imagined. From this verbal encouragement, and sometimes volunteer help with calling and preparing for meetings, the staff felt very confident that some meaningful things must be happening in terms of parent-child relationships as a result of the genuine concern and long hours of preparation on their part. The availablility of the staff four evenings a week to the students who worked during the day was very much appreciated also.

D. Results and Accomplishments of the Project:

(1) During the last four months of school the career consultant initiated the Philadelphia Plan, Room to Grow program in at least one sixth grade class in each of the elementary schools. (appendix C8-11) The teachers of these classes have been considered our resource people in their particular schools. Through this contact many other classes have become interested in integrating career information into the existing curriculum. They have done this through the use of discussions, field trips, and speakers from the community. (Lists: appendix B1-3) Community resource people were reinforced with a certificate to indicate participation in career education. (appendix B-5)

Supplementary material was injected into the Philadelphia Plan to assist in integrating it into all curriculum areas within the classroom and often requested by teachers other than resource personnel. These consisted of units, career games, and films. (appendix C12-14)

(2) In two junior high schools, Main and Ryan, different avenues were followed due to varying approaches of administrators and counseling departments. Main Junior High, at the onset of the school year, began a comprehensive program of student self-appraisal and occupational exploration as an organized, programed effort. This provided the impetus for a career devalopment thrust geared to involve all student and staff members within that school. With this committment to career education and the well developed expertise of the counselors, Career Extension Center personnel did little more than provide materials and utilize their staff and knowledge for in-service training.

Efforts at Ryan Junior High were limited to in-service training for counselors, development of a model career exploratory resource center, establishment of a career club and field trips and speaker resources for classroom teachers.

The Ohio Interest Inventory was given to several classes at the junior high level. This proved to be a valuable classroom tool for initiating interest in study of career units.

Two speech classes at Ryan Junior High took one of the Vocational Interest Surveys to determine a career cluster. Each student did research in his specific clusters and produced a taped speech consisting of the information he learned through readings and interviews. These tapes were then shared with elementary students.

(3) At Lathrop High School a variety of activities were introduced designed to implement career education. Lack of time coupled with a low level of enthusiasm shown by administrators and counselors at the onset hampered these efforts somewhat, but major accomplishments did occur as follows: (a) development and implementation of a course offering which allows students to receive high school credit for supervised on-the-job occupational exposures; (appendix B8, C15-17) (b) the development of departmentalized career packets to provide teachers with information and techniques particular to their specific fields; (c) introduction of a parent-student career exchange program; (d) increased support and enthusiasm from high school staff including principals, counselors and teachers.

Several teachers at Lathrop asked members of our staff to give their classes some of the Interest Inventory surveys. Later the results were explained to the students. This encouraged the students to seek more career information.

A pilot program was instituted in Career Education through the mathematics department to allow students to visit classmates parents at their place of work to see how math was utilized on a day-to-day basis. (appendix C3-C7)

(4) A brochure was developed to explain the over-all program to the community. These were mailed to all other districts requesting information mailed to all other districts requesting information about our program, to all members of the staff of the Alaska Department of Education, and to the State Vocational advisory board members. (appendix B4)

(5) Staff members spoke to approximately twenty service clubs and organizations to describe the work and to ask for assistance in creating stronger bridges between the school and community which would benefit the youth.

(6) A list of all career materials in the school district have been compiled. (appendix D) In addition to the existing career materials several thousand dollars worth of new materials were purchased for the ten schools and introduced to the teachers.

(7) Community cooperation for the Orientation-Work-Study-Placement Program was very encouraging. Often employers would call the Center when they had a position to fill.

(8) Four students who had dropped out of high school before finishing their senior year received regular high school diplomas through their work at the Career Extension Center.

(9) Twenty-nine students were helped to study for the High School Equivalency test and passed. Of these thirteen are employed full time, three are in special apprenticeship programs, four are in the military service, and three are attending the University of Alaska, at least part time.

(10) Approximately three hundred high school aged young people not enrolled at the Career Extension Center came for personal and career guidance services. Some came to ask for specific information, and some wished to enroll.

(11) Vocational interest surveys were given to all of the students enrolled at the Career Extension Center and to approximately seventy-five junior high and senior high students. The results were explained to them and placed in their folders.

(12) At the Career Extension Center school one hundred nineteen jobs of twelve hours per week or more were developed for seventy-nine students. Throughout the course of the year, thirty-eight per cent of the employment stations were terminated for reasons of upgrading employment, involuntary termination or job completion. Employment was not feasible for fifteen percent of the Career Extension Center students due to child care needs or academic requirements. An average of 4100 hours were worked per month by Career Extension Center students accounting for a monthly gorss wage of $11,480 representing an average hourly wage of $2.80.

(13) A very close relationship was established with the probation

officers who looked to us for help with those students who were just out of detention and because of timing, or general emotional state, could not catch up or adjust to a regular school setting. A similar rapport was established with the Drug Clinic, Hillcrest Home for Boys, Hospitality House (a home for girls), and with the Jesus People who have made a considerable impact on the youth of our community.

(14) The active participation of three Career Extension Center staff members in the Fairbanks Personnel and Guidance Association has brought about increased awareness of the counselors role in career education. The staff has led the association in pulling together workers in the various agencies in the community. The membership has increased from about fifteen members to approximately seventy.

(15) An active parents group met almost every month to discuss mutual problems concerning their children in relation to school and home discipline. They conducted a survey which is included in the appendix. (appendix B11-13)

(16) A Career Inquiry course was developed at the Career Extension Center which is designed to educate the prospective student employee with some of the realities of job seeking, and assistance in becoming better qualified as knowledgeable, employable citizens. (appendix C1-2)

(17) A student profile form has been developed which contains all the student's past achievement and aptitude scores as well as the results of his interest inventory surveys. This helps the student and counselor come to more realistic decisions in regard to future academic work and careers to consider. (appendix B-14)

(18) The Career Extension Center was open four nights a week throughout the year. This proved very helpful to students who had full-time day jobs.

(19) An experiment of an extension of the Career Extension Center program through the month of June proved to be helpful to several students. The average daily attendance was eighteen.

(20) Through cooperation of staff members of the Career Extension Center, Lathrop High School and the Educational Department of the University of Alaska, selected students will have the opportunity to take undergraduate college courses for high school credit or suspended college credit.

(21) A community occupational survey was initiated by the Orientation-Work-Study Program with the assistance of the Fairbanks North Star Borough School District Research and Planning Department but was not totally carried out at the completion of the school year. (appendix B-15) Plans have been made to continue that research in the insuing year but the following general inferences could be crawn at the time of this report from the 650 occupations

surveyed:

(a) Current employment opportunities in the Fairbanks area were limited to professional and highly skilled positions.
(b) There has been very little change in number of positions in the past two years with no detectable shifts in type of predominate occupational openings.
(c) Demand by employers for training programs was limited but what did exist consisted primarily of clerical skill needs. Some interest was also shown in personality and public relation type training.

OVERVIEW OF EVALUATION SECTION

This section contains the following parts:

(1) Objectives of the Project

(2) Selection of Participants

(3) Characteristics of the Participants

(4) Description of Measures

(5) Summary of Third Party Interim Evaluation Findings and Report

(6) Staff and Community Perceptions and Comments

(7) A Summary of Findings of the HEW Region X Office Review Committee

(8) Third Party Evaluation for the Year for Each Project Objective

(9) Overall Summary of Third Party Evaluation

Evaluation of the Project[1]

Introduction

This was the first year of the Project, and of course staff had to be assembled, operational details worked out, relationships developed, facilities and equipment allocated or purchased, etc. For these reasons, the very significant successes of the Project to date, the overall progress, the community acceptance of the Project and its objectives, the excellent staff which has been assembled and the prospects for the second year of the Project are especially impressive. As the following report indicates, this first year of the Project has been a fine benchmark in the development of education beginning in the primary grades in the Fairbanks North Star Borough School District. Much remains to be done in the future to accomplish all of the Project objectives including complete integration of the Project into the on-going educational program of the District, especially at grades 10, 11 and 12. Prospects for accomplishing this are good.

In connection with the evaluation, the third party evaluator had occasion to confer with teachers, counselors, administrators and board members individually and in groups on numerous occasions. At the outset, most of these persons (as the report to follow shows) actually had a very inadequate understanding of exemplary education as contemplated by the Project objectives; however, the general understanding and acceptance has progressed greatly as a result of the participation of many persons in the Project during its first year.

Emphasis in the evaluation of the first year of the Project was upon the collection of baseline data, the involvement of regular staff of the Borough School District along with Project staff so as to achieve mutual understanding of what should be and was being attempted and evaluated. Emphasis of the evaluation was also upon ascertaining the direction or focus of Project staff efforts or activities--since these would have a determining influence upon attainment of Project objectives. For the reasons indicated, little emphasis has been given this first year to the matter of measuring student achievement; however, the intent is to give increased attention to such measurement in the second year of the Project. Beginning with the first year of evaluation, the attitudes and roles of school staffs, counselors, administrators, board members and community are deemed to be of keen importance to the attainment of Project objectives (especially such as insuring that successful dimensions of the Project will become a part of the on-going education program of the North Star Borough and continue long after federal funding has been terminated).

The third party evaluator was privileged to maintain close contact with vocational staff in the regional office of HEW, and to participate in that office's evaluation of the Project also, which (in the writer's opinion) promoted mutual understanding and effectiveness of these efforts, as well as increasing the potential benefit to the Project, staff and education in the North Star Borough.

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[1] This section was prepared by Dr. Allen Lee, third-party evaluator and follows the pattern prescribed in "Preparing Evaluation Reports", (Superintendent of Documents Catalog No. HE 5.210:10065).

At the beginning of the year, a number of outcomes (pertaining to students, staff and community) were sought and anticipated. These included:

1. Increased student awareness of career options.
2. Increased student awareness of self and innate potentials.
3. Integration of career education into on-going instruction at all grade levels.
4. More realistic career choices by students.
5. Increased employability of students.
6. Increased comprehension of students, staff and community with regard to career education, especially vocational education.
7. Reduction of the drop-out rate, and bringing those already dropped out back into the education system.
8. Better school-community communication.
9. Better utilization of community resources for education.

The evaluation report which follows illustrates the significant progress which has been achieved during the first year, and points out areas which need particular attention in the future.

The specific objectives of the Project were used as focal points for this evaluation, which included three phases which to a considerable degree were overlapping and concurrent: (1) Self-Analysis, wherein staffs in the various schools engaged in introspection with critical looks at their own dimensions ofthe Project; (2) identification of perceptions (or lack thereof) on the part of the community in the North Star Borough; first-hand observation and evaluation by the third-party evaluator who (with some assistance) also coordinated phases (1) and (2) above. The specific Project objectives which were used as focal points for this evaluation and which in effect have determined Project activities to date and recommendations for periodic changes are listed below.

(1) <u>Objectives of the Project</u>

A. To broaden occupational orientation at the elementary, junior high, and high school levels.
B. To broaden occupational aspirations and opportunities for youths, including those who have academic, socio-economic or other handicaps.
C. To specifically identify dropouts (at whatever level), pinpoint causes for dropouts, plan preventative and remedial programs and promote implementation thereof.
D. To identify and develop new opportunities for work experience and cooperative education in several occupational areas.
E. To give more practical work experience to youth at various grade levels, and to have such experience characterized by learning while doing, significant responsibility for productive service to an employer, reimbursement (from employers) to the student for service rendered, and recognition of educational values (of such work experience) by awarding formal credit.
F. To achieve a more realistic picture of job opportunities and to utilize such information in training for employment.
G. To develop employability of students.
H. To develop the assumption of responsibility for placement of students at whatever level they leave the school system.
I. To create bridges between school and earning a living for young people who are still in school, who have left school either by graduation or dropout, or who are in post-secondary programs of vocational preparation.

J. To make greater use of existing school facilities, especially during the summer months.
K. To conduct inservice training for district and other personnel to achieve the objectives of this proposal.
L. To bring general educators, vocational educators, State Department of Education staff, local school staff, teacher educational staff, Model Cities staff, staff specifically concerned with the disadvantaged and handicapped, manpower agencies and others, together in coordinated efforts to achieve the objectives of this proposal.
M. To improve the status, scope and image of vocational-technical education.
N. To design and consumate an objective and effective evaluation to be used for periodic modifications of the Project.
O. To plan and promote expansion of activities to other districts (including private schools).

(2) Selection of Participants

The decision at the outset was to involve students and staff in all of the Borough schools except for those in about three small schools in somewhat remote areas.

Involved in some way in the Project were almost all of the schools during this first year. These included:

Barnette Elementary	613 students[1]
Birch Elementary	62
Denali Elementary	730
Hunter Elementary	632
Joy Elementary	578
Nordale Elementary	744
North Pole Elementary	801
University Park Elementary	676
Main Junior High	817
Ryan Junior High	965
Lathrop High	1,753

The extent of active involvement of staff and students was quite extensive and greatest in the elementary schools. It was somewhat less (although significant) at the junior highs. With the exception of the 75 or so dropouts who became enrolled in the Career Extension Center portion of the Project, involvement at the high school level was limited.

The greatest degree of readiness, willingness and ability to move was at the elementary level--and this was the most logical emphasis of involvement in the first year (except for the secondary dropouts where the need was very acute, the response and reception most enthusiastic). Counselors, administrators and teachers of the high school level expressed interest and support, but actually did not as a group get very involved as participants in the Project.

3/4

[1] Approximate figures

9

(3) Characteristics of the Participants

The two most extensive groups of students involved in the Project during this first year were elementary students who participated in awareness and orientation to career education, and the secondary students who had dropped out of high school. The elementary students were the body of students enrolled at these grade levels; in general all students in the class were included. The dropouts who enrolled in the Career Extension Center portion of the Project included a variety of boys and girls who for one or more reasons had dropped out or left high school. Some were discipline problems, some (many) from broken homes, some natives, some very bright students, some slow or reluctant learners, some had become disenchanted with the traditional school, some had problems with drugs and the police. Some of these students were quite stable and mature, others not. As described in more detail later in this evaluation report, in general the Project and especially the Career Extension Center has been a godsend to many of these students, and the potential benefit to the students and to society is great.

Both the awareness and dropout facets of the Project received major attention this first year, were very favorably received generally by staff, community and students, did much to establish a good image for the Project and constituted effective and efficient use of resources.

There was some criticism from some high school staff with regard to the Career Extension Center, but most of this was due to lack of adequate involvement, lack of understanding and lack of effective communication. There is increasing recognition (and this includes administration and counselors in the high school) that high school staff and students must be involved if the Project is to be effective and its programs lasting.

(4) Description of Measures

Two instruments were utilized in gathering data in written form for this evaluation. One was used primarily for collection of baseline data for the Governor's Advisory Council for Vocational Education which included data collection in the Fairbanks North Star Borough School District, and it was a simple planning matter to utilize the data for two purposes. This was the "Opinionnaire for Identifying Perceptions of Career Education" developed by Dr. Allen Lee. This instrument has been utilized in about a dozen states with several thousand respondents. Data collected were key punched and computer processed. The instrument has been refined to the point that it was a proven high level of reliability. The second instrument ("Perceptions Of Career Education") is also an opinionnaire adapted from the former for the specific purposes of this evaluation in the North Star Borough with critiquing and suggestions of a cross section of respondents in the North Star Borough. This second instrument was used specifically to identify viewpoints and the evaluations of counselors, teachers, administrators, board members and community representatives from the North Star Borough. Its focal point was the exemplary Project here being evaluated (Fairbanks North Star Borough School District Orientation-Work-Study-Placement Program).

Data for this evaluation were also collected via about 45 one-to-one interviews or conferences by the evaluator with key staff in each participating school, with central administration of the District, with Project staff individually and as agroup, and observations of the principal evaluator and/or staff.

The two instruments used for collecting written responses were used in the same manner in that each application was preceded by oral and written instruction, the instruments were completed without interaction among the respondents as a routine procedure and instruction. Customary practice also was to collect the written responses, and then to follow this with oral interaction to clarify differences, questions and gather additional data on a group basis. Questions posed were designed specifically to gather information and opinions of various respondents concerning the several objectives of the Project, including progress, problems, suggestions for improvement, and criticisms in general. Although the ostensible purpose of these instruments was data collection, experience indicates that application of the instruments along with the subsequent oral interaction serves another important function of communication and involvement.

Data were also collected by the principal evaluator, by Leonard Kunsman of the Oregon Board of Education, and by Jeannette Hamby of Portland State University who assisted at varying times. Reference here is to personal interviews with numerous administrators, teachers and counselors in the central office and in ten schools which actively participated in the first year of the Project. On these occasions classrooms (during and apart from instruction-learning sessions with students) were visited by the evaluators to observe facilities, equipment, materials in use, instructional and learning activities, etc.

Preliminary observations and oral discussions conducted in the participating schools resulted in an interim evaluation report submitted on January 5, 1972, based on the assumption that some trends were becoming apparent and that several factors might well be noted at that time to allow more preparation and planning for the second year.

(5) Summary of Third Party Interim Evaluation Findings and Report

Following the collection of baseline data, numerous group and individual discussions were conducted, a considerable amount of time was spent by the evaluator with Project and other staff, discussions were held on several occasions with central administrative staff, data collected to date were compiled and analyzed and it became apparent that an interim evaluation report might be of appreciable value. Accordingly, such a report was completed and submitted to the administration on January 5, 1972. The major purpose was to call attention to current findings, apparent or suggested trends, note various definite or tentative concerns --and thereby to provide all concerned with more preparation and planning time for the second year of the Project. It seemed essential that some of this be done prior to the making of personnel decisions for the second year of the Project also.

Immediately prior to formulation of the interim evaluation report (December 13 to 19, 1971), the principal evaluator personally conferred at length with the principal of each of ten participating schools including the two junior highs, the high school and seven elementary schools concerning their perceptions of various aspects of the Project. The insights thus gained, along with the previous discussions, the results of written data collection concerning baseline information, and other observations contributed to the interim evaluation report. Items orally discussed individually with each principal included:

1. The perceptions or understanding of the principal so far as Project objectives were concerned.
2. Discussion of key objectives of the Project, especially as these pertained currently and potentially to the principal's individual school.
3. The principal's perceptions of Project activities to date.
4. Identification of the principal's suggestions, problems, likes and dislikes regarding various dimensions of the Project.
5. The principal's suggestions for the improvement of Project effectiveness.
6. Explanation of the third-party evaluation requirements.
7. Discussion of school and community involvement in the Project and the evaluation thereof.
8. Review of the principal's suggestions on evaluation procedures and instruments, who to involve, the principal's suggestions for evaluative questions and procedures.

A summary of findings at this time (mid-December, 1971) included:

1. Staff of the schools looked upon the Project with much favor.
2. Project staff without exception were highly regarded.
3. Most school staff did not thoroughly understand career education or comprehend the nature of exemplary vocational education.
4. Most staff had a healthy interest in the Project.
5. Most of the principals in the elementary schools were very complimentary about the assistance given, for example, on materials for career awareness development.
6. Few schools knew much about what other schools in the North Star Borough were doing inthe Project or in career education.
7. Aside from the awareness aspect of the Project at the elementary grades, most staff saw the Project as being primarily the Career Extension Center, which to them was largely synonomous with"the droput program or project."
8. Principals looked favorably upon the concept of community involvement in providing resources which could be used outside of the classrooms, brought into the classrooms, or otherwise brought to bear upon the matter of developing improved education (especially as exemplified by various Project Objectives.
9. Most principals strongly favored the idea of involving community representatives in aspects of the Project evaluation.
10. Principals had numerous suggestions regarding written evaluation procedures.
11. Counselors knew relatively little about career educatb n or career guidance, and had little time for career guidance, although they professed a desire to do more.
12. Elementary teachers in general were very receptive to appropriate career education activities in their schools.
13. Most of the administrators indicated definite support for the Project and a desire for moreinvolvement as well as indicating they could and intended to exert more initiative.

The January 5, 1972 interim evaluation report then listed each of the 16 formal objectives of the Project (which are repeated later in this report) and commented concerning the importance and progress toward attaining each. It was noted that one could not expect to concentrate

on all objectives simultaneously, that excellent progress had been made on some objectives, and none toward others. A summary of suggestions reviewed orally with staff in mid-December 1971 and submitted in the written interim report on January 5, 1972 included:

1. The Career Extension Center and its efforts with the dropout have progressed in such a fine manner. It is not desirable to de-emphasize the Career Extension Center, but it is equally or more undesirable to overlook other objectives of the Project. It is imperative that an appropriate balance and allocation of effort and resources be carefully planned and implemented.

2. Education is so frequently situated so that demands and needs exceed resources. No one intended or expected all Project objectives to be either accomplished or attempted in the first year; however, more balance among the Project objectives than currently exists is essential.

3. Attention might well now be given tothe identification of priorities (so far as Project objectives are concerned) for the balance of this first year, for the second year, and for the third year of the Project. It follows that employment and assignment of staff, and budget expenditures should then be made in line with those priorities. The nine points listed below summarize this evaluator's best judgment at this time.

4. Sharpen the understanding concerning:
   A. Who has overall responsibility for the Project.
   B. Who has responsibility(ies) for each objective of the Project.
   C. Who has responsibility for Project activities outside the Career Extension Center.

5. Continue the fine work with dropouts in the Career Extension Center.

6. Assign responsibility and emphasize effort to apply Project objectives in all schools (and all grade levels) outside of the Career Extension Center.

7. Employ and/or designate a staff member with responsibility for achieving objective "A" which pertains to the development ofawareness at the elementary, junior high and high school levels. This is also related to objective "B" pertaining to broadening occupational aspirations.

8. Assign specific responsibility at earliest possible time for objective"C" which has to do with identifying dropouts at all levels, causes therefore, and planning preventative actions and implementing those plans.

9. Assign responsibility for objectives "D" and "E" which are concerned with "work experience" for students (especially outside of the Career Extension Center) and at various grade levels.

10. Assign responsibility and precipitate meetings (early February) to achieve objective "K" which concerns inservice education.

11. Assign responsibility for action to achieve objective "L" which concerns coordinated effort and involvement of staff in addition to those paid with Project federal funds. Should include at least counselors, curriculum people and work experience people.

12. Precipitate action to formally complete the matrix, designating priorities, people and grade levels in line with discussion held in the Career Extension Center building on December 16.

13. The prevailing image of the Project has been good--but most people have viewed it as a dropout program. The Project must be much more than that to survive, to do the job desired, and to receive continued federal funds.

14. The Project has an excellent and dedicated staff with superb morale. They should be proud of their efforts which contribute to the fine education in the Fairbanks North Star Borough.

(6) Staff and Community Perceptions and Comments

Some 55 persons were invited to provide written responses and comments on 30 areas related to Project objectives. Respondents included three members of the schoolboard, eleven principals, teachers, counselors, two librarians, and representatives of the community. Key questions, a summary of responses and comments included:

1. Note: Some schools provide learning experiences designed to help students become aware of the broad field or world of careers and the potential opportunities for future employment.

   A. In this respect, what is your school* doing now?

Responses	
A lot	12%
Some	48%
Very little	20%
Don't Know	20%

   B. Should your school* be doing more or less on this?

Responses	
Much more	44%
Some more	40%
Less	0%
Don't know	16%

*School board members, central office administrators and others not attached to a single school responded in terms of the district schools generally. Perons such as teachers, principals and others responded in terms of the particular school to which they were attached.

C. Who should be directly responsible for developing student awareness to the broad field of careers?

Findings:

Strong concensus was that counselor, teachers and parents should all have vital responsibilities here.

D. Which students need more of this kind of education than they are now getting?

Responses	
All students	72%
Some boys	4%
Some girls	4%
The academically talented.	4%
Those not academically talented	20%
Those economically deprived	20%
Ethnic minorities	16%

Respondent Comments:

Not enough learning experiences; 6th grade level doing a lot
Uneven in our school
Career Ed depends on teacher
Teachers need help in working career Ed into programs
Actual training and experience
All should take responsibility

2. Note: Individual schools may or may not provide instruction designed to make the student aware of his own abilities, likes, dislikes and potential for earning a living and serving society in a productive manner:

A. What is your school now doing?

Responses	
A lot	8%
Some	60%
A little	8%
Nothing	8%
Don't know	16%

B. What should your school be doing in this regard?

Responses	
Nothing	0%
Some more	32%
Much more	40%
Don't know	28%

3. Concerning the matter of your school providing instruction and activities (such as field trips, outside speakers, etc.) in an effort to broaden the career aspirations of all students:

A. What does your school now do?

Responses	
A lot	12%
Some	28%
Little	24%
Nothing	0%
Don't Know	16%

B. What should your school do?

Responses

Much more	64%
Same as it is now	16%
Less	0%
Don't Know	16%

Respondent Comments:

Several field trips
Not enough in relation to opportunities available - 6th grade only
Need coordination of program
Need some more
Responsibility should rest on one person

4. Does your school identify and maintain a list of dropouts?

Response

Yes	44%
No	12%
Don't Know	44%

Respondent Comments:

We have very few dropouts
State Department of Education requires a report on each dropout or transfer.
Really don't have any.

(Analysis indicates that the "don't knows" came primarily from persons not on school staff.)

5. Does your school identify the reason for each dropout?

Response

Yes	32%
No.	20%
Don't Know	48%

Respondent Comments:

A checklist is provided; however, some reasons are not on checklist. Result, mark the reason which more closely represents the case.
Not a complete list
Really don't have any

(Analysis indicates the "don't knows" were primarily from other than school staff.)

6. Is it possible to identify potential dropouts before they physically leave school?

Response

Yes	76%
No	4%
Don't Know	20%

6. (continued)
Respondent Comments:
Only a good teacher can do this.
I believe it is.
This really doesn't apply.

7. Does your school attempt to identify potential dropouts?
Responses
Yes 36%
No 16%
Don't Know 20%

8. For which (if any) types of students in your school is some form of work experience (part-time, with pay, without pay, with or without academic credit, etc.) desirable?
Those not academically inclined 16%
Those academically talented 20%
All students 48%
No students 16%

9. In what types of careers should some form of work experience be provided?
Responses
Electrical 60%
Real estate 52%
Transportation 44%
Communications 40%
Sales 56%
Medicine 36%
Law 40%
Public services 76%
Teaching 56%
Secretarial 80%
Construction 72%
Automotive 76%

Respondent Comments:

All students should acquire experience to some extent to gain insight and respect to labor and our economic system.
All students need work experience.
Very little of this in our school.
Depends on parent-student desires.

10. Should the school cooperate with business, professional and industrial employers to arrange work experience for which the student receives pay?
Response:
Yes 96%
No 0%
Don't Know 4%

11. Should the school arrange for work experiences in which the student receives some work experience but receives no pay?

Response:

Yes	92%
No	4%
Don't Know	4%

Respondent Comments:

Time without pay in a given setting should be limited to nine weeks.

12. Should the student get academic credit for work experience (such as in a garage, store, state agency, school, real estate office, etc.) if that experience was co-ordinated by the school?

Response:

Yes	96%
No	4%

Respondent Comments:

Schools would be better off it did away with "academic credit"

13. Should the school arrange for students to receive work experience:

During school hours	64%
Outside School hours	60%
During vacation	68%

Respondent Comments:

Depending on student student--program should be individualized.

Unemployment is severe in our area. Efforts must be made for Alaska to hire Alaska youth.

Whenever possible.

14. How desirable or necessary is it that school staff be aware of probable potential job opportunities for graduates?

Response:

Non-essential	0%
Nice to know but not too important	8%
Essential	92%

Respondent Comments:

Part of Career Ed is educators to always gather information for benefit of students.

It is essential that instructors know the fields of employment.

Counseling staffing in high school has too much paper work, needs of students seem to be ignored because of this.

More important to direct and train student in his intereest areas. Person that does something well and likes it can get a job.

15. How much <u>does</u> the school staff know about probable needs for manpower?

<u>Response:</u>

A great deal	0%
Some	48%
Not much	40%
Don't know	12%

16. Should the schools prepare youth for eventual employment in the local community?

<u>Response:</u>

Yes	68%
No	4%
Don't know	28%

<u>Respondent Comments:</u>

The schools should prepare youth for eventual employment, but not limited to local community.

Yes, only if community recognizes the youth has something to offer and will hire them.

More important for student to be trained in area he likes and can do well.

17. Should the schools assume that youth may be working some day in another community or state?

<u>Response:</u>

Yes	88%
No	0%
Don't know	12%

18. Does your school endeavor to teach students how to work?

<u>Response:</u>

Yes	48%
No	40%
Don't know	12%

19. <u>Should</u> your school do more or less than it currently does in teaching students <u>how</u> to work?

<u>Response:</u>

Much more	44%
Some more	24%
Same	16%
Don't know	16%

<u>Respondent comments:</u>

The school can't teach students how to work unless there is some family background there.

Most school work and real work aren't comparable at all.

Limited to Industrial Arts and Special Education, low I.Q.

Quite limited.

Elementary schools must teach attitudes of responsibility, etc. which will come over into work areas.

20. Who should have responsibility for teaching students how to work?

Response:

Vocational director	20%
All teachers	84%
Some teachers	8%
Counselors	24%

Respondent Comments:

Parents must cooperate
Principal decides who stays, etc.
The staff involved in Vocational education.

21. Does your school assist students who leave the school (by graduation or otherwise) to get located in another school or get employment?

Response:

Yes	40%
No	36%
Don't know	24%

Respondent Comments:

Limited to sending records, using local agencies.
Some teachers do.

22. In your opinion should your school assist in placing students (in a suitable educational situation or on a job) who leave the school by graduation or otherwise?

Response:

Yes	76%
No	4%
Don't know	20%

Respondent Comments:

For those who desire it.
School should follow student through adjustment period and assume responsibility of upgrading or retraining when necessary.
Provided we don't duplicate work of existing agencies.

23. In your opinion, should school facilities be used more?

Response:

Yes	80%
No	4%
No opinion	16%

Respondent Comments:

Cost too high.
Any school couldbe used 24 hours a day year round.
School facilities belong to community and should be used for adult education as well as youth.
For adult education and extended school days as well as semester school.
Recreational activities as Fairbanks offers little to the youth.
They are being used both day and night at present.

24. Do you see a need for inservice training (in career education) for teachers or other staff?

Response:

Yes	88%
No	0%
Don't know	12%

Respondent Comments:

When and where most convenient with credit.
Vacation time, at school, summer, late July
Locally
Graduate credit for all
All staff and teachers
Set up behavioral objectives
Favor released time where teachers teach four days, then Friday is used for training.

25. Does a lack of finances, equipment or materials restrict career education in your school?

Response:

Yes	64%
No	36%

Respondent Comments: (what is needed, etc.)

Personnel and inservice.
More education for teachers.
They could do it if they weren't so conservative.
Severe lack of teacher, administration
A commitment from the administration endorsing career education program; K-adult trained personnel to assume leadership.
Tools, typewriters, stoves, money for trips, cash registers, kitchen equipment, meters, batteries, etc.
Need extra space.
Finance to hire biggest problem.

26. Should a formal course in Career Education be offered in your school?

Response:

Yes	76%
No	16%
Don't know	8%

Respondent Comments:

For those who want grade credit.
A full time person should be appointed to work on just careers.
If Career Education begins in Kindergarten, there should be no need for a formal course.
Should be correlated with all subjects to show relation to school and to be effective.
Don't call it that, though.

27. Should Career Education be required for all students?

Response:

Yes	64%
No	20%
Don't know	16%

Respondent Comments:

Only if interested; all students should be made aware, but not required.
I don't believe in requiring, but students should be exposed.
No attempt made to inform students of material available.
Many will never be aware of Careers. High School does a poor job of training after graduation.
Elective.

28. Do you have adequate Career Education information in your school library?

Response:

Yes	44%
No	44%
Don't know	12%

Respondent Comments:

A good beginning.
What we have is hardly used.
Nobody pays attention to it.
Greatly improved in past year.
Semester course.

29. Does your school have counselors who have adequate time available for career counseling?

Response:

Yes	12%
No	76%
Don't know	12%

Respondent Comments:

They are expected to be all things to all people and are doing things they shouldn't have to do. They don't have the time to spend in this area.
None at all.
But they do a poor job of it.
The principal and counselors had a conference immediately before school closed. The purpose was to recommend acounselor for a summer work shop in career education. No counselor, except me, would take the time from their summer vacation nor do they want to become involved.
Neither time nor adequate training or desire. By this an admission it is too much work!
Schedule board refuses to see need for counselors on elementary level--cost too much.

(7) A Summary of Findings of the HEW Region X Office Review Committee

On April 5 and 6, Mr. Samuel Kerr, Acting Director for School Systems in the United States Department of Health, Education and Welfare Region X Office directed a Review Committee which functioned in Fairbanks. The Committee's work was well received and renderedvaluable service to the Project. Because it focused upon the five major provisions of BAVTE/DVTE Policy Paper AVL-V70-1 under which all of the Project's objectives are grouped, the HEW Review Committee's findings present a concise andvaluable overview of Project status at that time. Because the Project's third-party evaluator was privileged to serve on the Review Committee, it was made possible for the two efforts to be mutually complementary for the benefit of the Project. The five guiding factors in the Policy Paper and the Review Committee'sfindings in brief are:

The Part "D" Exemplary projects are intended to put into practice some of the Research & Demonstration activities that have been undertaken in thefield of vocational education. Each of these projects is intended to conduct research-based career education that combines, in one operational setting, all of the following factors:

1. Provision for a broad occupational orientation at the elementary and secondary school levels that will make the student aware of the range of options open to him in the world of work and how his interests, aptitudes, and abilities relate to them.

2. Provision for work experiences, cooperative on-the-job education, institutionalized training, simulated experiences or other similar programs that make possible a wide variety of offerings in many occupational areas.

3. Provision for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to leaving school. (Some of these programs might be very intensive and of short duration).

4. Provision for intensive occupational guidance and counseling during the last years of school and for initial job placement of all students at the completion of their secondary schooling. (Placement might be in a job or in post-secondary career preparation.)

5. Provision for the grantee or contractor to carry the program on with the support from regular funding sources after the termination of the Federal Assistance.

With these five guiding factors in mind the project at the present stage of development and operation appears to be fulfilling the intent of factors 1-2-4-5 in varying degrees, but does not seem to be directing attention to factor No. 3.

FACTOR No. 1

Project Objective #1 - To select, develop and implement curriculum provisions to achieve broad career (occupational) awareness and

orientation at the elementary, junior high and senior high levels.

The plan for developing and implementing this objective is well defined in the proposal statements. Summer institutes and seminars which bring together elementary, secondary teaching personnel, school administrators, guidance counselors, State Department of Education specialists, Consultants and Project Staff to develop materials and procedures seems to be an excellent approach. When the study guide for occupational education in grades K-12, referred to in the project, is fully developed and implemented according to plan, the career awareness and orientation phase of the Project should be strengthened and the students served as envisioned in a total career education concept.

A discussion of the role of the elementary school in providing career awareness and orientation as an integral component of the Project with teachers and administrators revealed an intense interest in the contribution they could make. They expressed their concern for additional workshops and seminars that would apprise them of ways and means of adapting curriculum and methods to fit the concept. Most of the people involved in the project seem to be knowledgeable about what needs to be done and are anxious to participate in work sessions that will provide the technical assistance needed to:

A. Identify sources of occupational information and materials.
B. Adapt curriculum to career education concept.
C. Develop applicable teaching methods and procedures.

FACTOR No. 2

Stated Project Objective #2 - Promotion and Implementation of Work Experience and cooperative education to facilitate a wide variety of educational opportunity especially suited to the needs of dropouts, potential dropouts, disadvantaged, handicapped and other students, including those with special needs.

The Career Extension Center appears to be providing for the identification and rehabilitation of dropout students in an adequate manner, however, the service to the potential dropout seems to be either very weak or non-existent. This may be attributable to the separation of the Extension Center from the school facility which gives the impression that the center is an entity within itself and not part of the total education system.

Many of the jobs in which the student is placed fill the student's need for financial assistance and job responsibility but in some instances are not true cooperative education training sites where on-the-job experiences and training, correlated with in-school activities, lead to employment in career ladder positions. The committee recognizes the value of jobs which fill the students' needs for financial assistance and job responsibilities in the rehabilitation process and strongly encourages the continuation of this program. We would recommend, however, that whenever possible. emphasis be focused on placing students in career ladder jobs with the potential for cooperative training. The full potential of the high school vocational programs in trade and technical, business, distributive and Consumer-Homemaking education does not appear to be utilized in the Project at this time. A stronger effort needs to be made to correlate these activities with the other phases of the Project.

FACTOR No. 3

Stated Project Objective #3 - Development of Provisions for Students not previously enrolled or adequately served by vocational programs to receive specific training in job entry skills just prior to the time they leave school.

The plan of action as outlined in the Project identifies very accurately what needs to be done to accomplish this objective. At this stage in the Project it appears that very little has been done to implement this very important aspect of the Project.

Some of the activities that should be undertaken to accomplish this objective include:

A. Procedures for identifying students who are nearing completion of their high school program, or are potential dropouts, who need salable skills. Use of Guidance Counselors should be an important part of this process.

B. Provide intensive vocational education in many occupational areas through the use of extended day or evening instruction. Cooperative education training agencies and vocational education facilities may be utilized separately or in concert to provide the training. The adoption of individualized instruction units should be explored.

FACTOR No. 4.

Stated Project Objective #4 - Provision for implementation for intensive guidance and counseling during the last years of schooling and for initial placement of students at the completion of their schooling.

The committee was impressed with the emphasis placed on the guidance and counseling needs throughout the total school system. This must be recognized as the heart of the total Project and must certainly reflect adequate staff to provide the services. A discussion with the counselors at the junior high level suggests that many worthwhile activities are being carried on. To accomplish the accepted objective more time and staff needs to be devoted to it and the guidance counselor-student ratio should be established at a workable level. Additional guidance and counseling staff added on a division-wide basis should do much to strengthen the total career education effort.

The first year of operation which, as projected, was to be devoted to the establishment of the project, must be viewed as one of commendable accomplishment. To continue with the outstanding work being done and to bring the project to fruition the committee feels that the following activities, included herein as recommendations, must be adopted at an early date:

1. Review the organizational structure of the Project, revising it as needed to combine the several components of the existing Project into a unified whole. At present it appears that the Career Extension Center is an entity within itself rather than one phase of a total Career Education project affecting all students in the North Star Borough and not the dropout alone. There seems to be a need for more coordination between

the vocational education division, the elementary secondary division and the Career Extension Center. One such organizational structure could be organized as:

Project Director
Office of Assistant Superintendent

Coordinator Extension Center	Coordinator All Vocational Programs	Coordinator Elem. & Sec. & Guidance

2. Provide an Intensive Vocational Curricula that will prepare students who are approaching the end of their formal school program with salable skills in their selected occupational area. This will require direction from the coordinator of vocational programs.

3. Conduct in-service workshops during the summer to explore methods of correlating all elements of the Project and to develop curriculum and guidance materials related to the career self-awareness and orientation phases of the Project.

4. Conduct a workshop this summer for all guidance and counseling personnel in the North Star Borough School District and the Project staff. This will provide opportunity for an exchange of ideas on project goals and promote correlation of the overall guidance activities with the Project objectives.

5. Revise Project time-line schedule to conform with the delayed funding date and Project start.

The review committee was favorably impressed with the activities being carried on and the apparent dedication of the staff to meet the needs of all students.

(8) Third-Party Evaluation for the Year for Each Project Objective

Data for this evaluation were gathered in a variety of manners throughout the year. These included:

1. Self-Analysis - Wherein Project staff and other school personnel (teachers, principals, counselors, central administration and curriculum personnel) gave their individual perceptions of the various aspects of the Project in writing and/or in oral discussion. School board members were also included.

2. Community Reactions - Wherein a cross section of parents, business and industrial representatives gave their perceptions of the various dimensions of the Project in writing and in discussion.

3. Third-Party Observations - Wherein the principal third party evaluator and assistant personally observed Project operation on many occasions in the Career Extension Center, observed instructional-learning activities in classrooms throughout the Fairbanks North Star Borough School District, conferred with school staff (teachers, students, counselors, principals, etc.) in all schools, met with Project and related staff in groups and individually, and conferred with other interested parties.

The third party evaluator collected a variety of data, analyzed and interpreted these, considered the perceptions of many, and formulated conclusions. The observations and suggestions of myriad persons were considered in the formulation of the following evaluation; however, in the final analysis, the various statements represent the best judgments of the third party evaluator.

(A) Project Objective:: To broaden occupational orientation at the elementary, junior high and high school levels.

Good progress was made in elementary schools. Some good progress was made in the two junior high schools. For example, the work of Frank McGuigan in Main Junior High was exemplary. Relatively little was done at the high school--and this merits major attention next year. Excellent progress was made with those dropouts who enrolled in the Career Extension Center. Little was done with others.

(B) Project Objective: To broaden occupational aspirations and opportunities for youths, including those who have academic, socio-economic or other handicaps.

This should apply to all students at all grade levels. The major thrust of effort during the first year of the Project had been for those high school dropouts who enrolled in the Career Extension Center. The counselors and other staff in the Career Extension Center did fine work and made excellent progress with this group of dropouts. Specific attention might well be given to those youth (especially those with handicaps) in the regular District schools. A look at what is being done in this regard in the exemplary Project at Helena, Montana is suggested.

(C) Project Objective: To specifically identify dropouts (at whatever level), pinpoint causes for dropouts, plan preventative action and implementation thereof.

This has yet to receive adequate attention. There is need for the regular school counselors to become involved in this. The Project Director, in conference with central staff and the school principals might provide the necessary leadership and precipitate action here. University involvement, such as with an intern and/or a Master's or doctoral candidate is a possibility which might be explored and implemented.

(D) Project Objective: To identify and develop new opportunities for work experience and cooperative education in several occupational areas.

A fine job is being done for droputs enrolled in the Career Extension Center. The regular high school cooperative program and the Career Extension Center program need to be integrated, with a joint staff working closely together. Note comment in section (7) (Factor No. 2) preceding. District staff (regular and Project) need to define the nature of desirable "work experience" for <u>each</u> grade level and then regular and Project staff should proceed to expand this phase of education in the North Star Borough School District.

(E) Project Objective: To give more practical work experience to youth at various grade levels and to have such experience characterized by learning while doing, significant responsibility for productive service to an employer, reimbursement (from employers) to the student for service rendered, and recognition ofeducational values (of such work experience) by awarding formal credit.

Note comments on item (D) above. The suggestion is that each school should define appropriate "work experience" for each grade level, one person in each school should be designated with responsibility for coordinating the individual school's work experience program, and one person should be responsible for District-wide coordination. All of these coordinators (with the possible exception of the last) should be paid with District rather than Project funds. Maybe a responsibility of the District Vocational Director's office.

(F) Project Objective: To achieve a more realistic picture of job opportunities and to utilize such information in training for employment.

Little systematic attention has been devoted to this to date. The suggestion is that the District vocational Director's office might head up this activity. He should work closely with the office of the State Director of Vocational Education and other state agencies on one hand, and with local school staff (teachers, counselors, curriculum staff and Project staff) on the other hand in this objective. The local advisory council(s) has a key role to play here.

(G) Project Objective: To develop employability of students.

Career Extension Center activities have made excellent progress in this objective. Staff from the District Central Office, the several schools, (all grade levels),the Vocational Director's office and the Project should work together in defining the nature of "employability" deemed to be desirable for each grade level, respectively.

(H) Project Objective: To develop the assumption of responsibility for placement of students at whatever level they leave the school system.

The Career Extension Center is exercising this function on behalf of the students enrolled therein. The intent District-wide should be to help or assist with placing each student (who leaves a school via graduation or otherwise) to become suitably situated in either a continuing education program or on a job. Such provision might well be considered for incorporation in the District's position statement on Career Education subsequently referred to.

(I) Project Objective: To create bridges between school and earning a living for young people who are still in school, who have left school either by graduation or dropout, or who are in post-secondary programs of vocational preparation.

Again, the work with those students enrolled in the Career Extension Center is superb. There is need to generate a program for identifying other young people and their needs, and doing something about these. The suggestion is that leadership for this might best begiven by the Director of Vocational Education for the District.

(J) Project Objective: To make greater use of school facilities, especially during the summer months.

This is important, but not of the highest priority. Unless pressure for action develops spontaneously, the suggestion is that available talent be focused upon higher priorities at this time.

(K) Project Objective: To conduct inservice education for District and other personnel to achieve the objectives of the Project.

Group and individual inservice to date has been good. Much more is also needed to prepare and enlist District staff in the attainment of Project objectives to improve education in the District. Inservice meriting top priority in the near future should involve staff from all grade levels and include:

(a) A study of the cluster concepts
(b) A review of existing cluster systems
(c) Identification (formulation if necessary) of a cluster taxonomy deemed most appropriate for the North Star Borough School District
(d) Establishment of cluster priorities for various grade levels (recognizing it is not feasible to give attention to all clusters at each grade level)
(e) Curriculum study and revision to identify and incorporate elements of career education at all grade levels

Inservice (desirably in cooperation with a university counselor education program) should also focus upon the identification of new roles and responsibilities (for counselors, teachers and curriculum staff) for career counseling.

(L) Project Objective: To bring general educators, vocational educators, State Department of Education staff, teacher education staff and others together in coordinated efforts to achieve the objectives of this proposal.

During the first year of the Project there have been numerous instances of fine coordinated efforts of state education agency staff, North Star Borough staff, university staff and community. Excellent as such efforts have been, there is need for these to be intensified and greatly expanded. Project staff efforts have been effective in directly working at Project objectives. However, there are insufficient Project staff to get the total job done alone, and even if they could this would not enhance the chances for successful activities to continue when Federal funding ceases. The Univeristy has something to contribute, and a great deal to gain by being actively involved. The greatest need in relationship to this objective and the total Project is for counselors, curriculum staff, principals, the North Star Borough School District Vocational Director and staff, and teachers throughout the District to assume responsibility for implementing appropriate exemplary career education at the various grade levels.

(M) Project Objective: To improve the status, scope and image of vocational-technical education.

Project activities in career education should encompass vocational-technical education even more than they have to date, and needed leadership can best be given in this regard by the District's Vocational Director. Some good involvement and cooperation has been existant from the conception of the Project. More is urgently needed. The Project to date has contributed substantially to the vocational-technical image and its enhancement. A great potential remains untapped.

(N) Project Objective: To consumate an objective and effective evaluation to be used for periodic modification of the Project.

To date, school staff and the community have cooperated enthusiastically in the design and conduct of the evaluation. Central staff and Project staff have been objective, helpful and responsive not only in the collection of evaluation data, but (equally of more importantly) in their receptiveness to and action upon suggestions.

(O) Project Objective: To plan and promote expansion of activities to other districts (including private schools).

There has been good communication with the State Department of Education staff (both general and vocational). This needs to be continued and expanded, to meet the needs for dissemination which will be increasingly greater in the second and third years of the Project. The Project staff have been hospitable and helpful to the occasional visitors. Many more may be anticipated. The District, the State Department and Project staff should together devise a promotional, informational program to encourage visitors.

The University has had some good but relatively meager involvement. The Project and the attendant concepts of exemplary Career Education have monumental implications for preservice and inservice training for all prospective and current teachers. There is urgent need for development and implementation of a plan for teacher education and counselor education staff at the University to "get with it".

(9) Overall Summary of Third Party Evaluation

(A) Project activities for the first year were high priority and outstanding progress has been made.

(B) The attitude and leadership of the local administration and especially of the Assistant Superintendent have been excellent and effective.

(C) The District has recruited and assigned an outstanding staff to work on this Project. They have worked diligently and effectively and are to be complimented accordingly.

(D) The fine Career Extension Center has constituted a highlight of Project development in this first year.

(E) The immensity of the tasks inherent in the Project precluded the possibility of attacking all of the objectives during the first year.

(F) Even with Herculean effort, Project staff alone cannot hope to attain the objectives of this Project; nor is it desirable for them to do it alone. Intimate and extensive involvement of regular District staff is absolutely essential to all phases of this activity.

(G) The Career Extension Center cannot hope to meet all current or prospective needs for dropouts. The answer is not to expand the Center so much as it is to involve the regular high school staff (administrators, teachers and counselors), the central office staff, and the Vocational Director's office in the effort to consumate change for improvement in the District schools.

(H) The District Vocational Director and staff have been cooperative and helpful since the conception ofthe Project. The need now is for those people to assume more responsibility and be much more actively involved.

(I) Principals throughout the District need to be involved more. They are aware of needs and appear to understand the concepts of career education many times--but some combination of factors has kept them from as much active involvement as they should have in the Project.

(J) Central office and especially high school staff should be much more intimately involved in policy-making for the Career Extension Center than they have been. This will be for the good of Lathrop High proper as well as the Career Extension Center. The Career Extension Center policy, operation and image should be such as to make it an actual part or dimension of Lathrop--rather than a separate and independent high school. The objective should be to encourage some Career Extension Center students to take some of their education courses at Lathrop while enrolled in the Career Extension Center. Whenever and as rapidly as possible, Career Extension Center students should be phased into Lathrop.

Counselors in general have been friendly bystanders, and now need to be given (or assume) specific and active roles in seeking attainment of Project objectives.

(K) The Assistant Superintendent should exercise leadership in identifying new roles and responsibilities for counselors, curriculum staff and teachers in working together to improve career counseling.

(L) Awareness,orientation, exploration, cluster training and vocational training need expansion at various grade levels.

(M) Inservice education for teachers, counselors, and principals at all grade levels should be given one of the highest priorities for use of Project monies in the second year.

(N) Early attention (inservice) should focus upon the identification and adoption of a career cluster taxonomy and the assignment of priorities to the clusters. These priorities should be the focal point for curriculum planning in career education at each grade level.

(O) The Assistant Superintendent should provide leadership for the identification and development of desirable student outcomes

(behavioral objectives) relating to the Project, vocational and career education generally.

(P) The Assistant Superintendent should provide leadership for the formulation and eventual adoption (by the School Board) of a District position paper or overall policy for Career Education.

(Q) Project and District staff are deserving of high praise for the dynamic and worthwhile accomplishments of the Project in the first year.

(R) The successes of the Project to date and apparent plans for the future constitute ample justification for continued federal funding. This is fruitful investment of taxpayers' monies!

F. Conclusions, implications and recommendations for the future.

(1) At present one Career consultant covers the entire district. It is recommended that two others be added to the district; one for elementary, one for the junior high schools, and one for the senior high school.

(2) The three Career Consultants should have a separate facility and work under the direction of the Assistant Superintendent who is directly responsible for all school curriculum. This would remove the connotation of being a program more closely associated with the Career Extension Center school than with any other school in the district.

(3) Although we have an up to date bibliography of all the career related materials in the school district, it must be broken down into a more usable form. The technical materials should be separated from the general information materials. A suggestion is to indicate in some way what objective or developmental goal would be best met by material used.

(4) There is a lack of intermediate career development materials within the school district. It is recommended that more materials be previewed and then purchased in this area.

(5) The Room to Grow material should be re-evaluated. It is possible that it should be used at an earlier age, or substituted by something that seems more appropriate.

(6) It is strongly recommended, due to past successes in this area, that considerably more local audio-visual materials should be developed to present community resources. This is an excellent learning tool for students--both in the development area and the viewing of the final productions.

(7) The total curriculum of the school distirct, K-12, needs to be more carefully studied to cover areas without repetition or deletions. The Career Curriculum can then be better integrated into the curriculum to more effectively capitalize on the total educational process.

(8) Beginning in the intermediate grades, it is recommended that an on-going career profile be developed on each student in the district's school system. The career profile will reflect occupational contacts, exposures, test scores and counseling records as the student progresses through the school program.

(9) Staff contacts and survey results show a very great need and demand for in-service training and workshops if an integrated career program is to have any impact upon the students in our school district.

(10) It is recommended that the teaching staff at the Career Extension Center be increased in number.

(11) There should be a continued effort to seek funds for on-the-job training.

(12) A flexibility of scheduling, especially in the vocational programs, should be instituted to better aid the career guidance of potential school dropouts. This flexibility should include the cooperative programs as well as the skill building courses such as carpentry, printing, etc.

(13) More night school opportunities and innovative summer programs should be developed to expand services to students.

(14) A greater utilization of the University resources should be a priority for the coming year. More communication and cooperation with the University staff could bring more awareness on the part of the student teachers of the career development program, developing units for individualized teaching and tutoring techniques. There should be an exploration of ways in which credits can be transferred, and the expertise of the University staff could be tapped for services to the young people who are disenchanted with their public school experiences.

(15) The occupational needs and training survey now in progress in the Fairbanks area should be continued.

(16) In order to use job-training stations throughout the community, some provision should be made for student transportation. The cold weather prevents the students from walking very far, and public transportation is virtually non-existant. This precludes taking many good jobs in the out lying areas.

(17) Consistent, continued research should be carried out to find causes for students dropping out of school and methods of prevention.

(18) The counselors in the school district need to find ways in which they can spend more time in person-to-person and group counseling sessions rather than be consistently inaccessible to the students due to clerical work.

(19) As often as possible, students who have been helped at the Career Extension Center should be encouraged to return to Lathrop High School, at least on a part-time basis.

APPENDIX A

PAYSTREAK

Vol. XXXV, No. 3 LATHROP HIGH SCHOOL, FAIRBANKS, ALASKA Friday, Oct. 1, 1971

Career Extension Center will help dropouts

New approaches to learning are being instituted in the Fairbanks North Star Borough School District.

Under direction of Mrs. Irene Cleworth, counselor last year at Lathrop, an orientation-work-study program has been established. Located in the Career Extension Center at 1416 Gillam Way, the facility serves 50 to 60 students who have dropped out of school.

The students work toward a high school diploma by taking one half day of individual instruction, and one half day of job training.

Classwork is not easy, or "mickey mouse," but different in that the student is involved in planning his own program, in which he works at his own pace to complete units for credit.

The students also receive credit for work done on jobs.

By the administration of career interest tests, and under the supervision of a work experience coordinator, the student is helped to find a job or to choose a vocational course offered in the school district.

Young mothers wishing to complete their education often bring their babies to this relaxed atmosphere.

Orientation-work-study program students are invited to come to Lathrop for lunch, and to extra-curricular activities such as dances.

The school staff includes two teachers and a counselor, a student government, and an advisory board. The latter consists of local businessmen and women, students, and other concerned people.

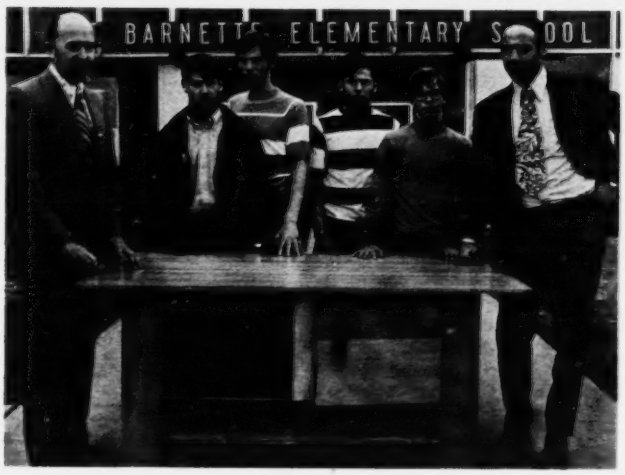
On a typical day, a casual visitor to the center might observe two or three students studying at tables, a group involved in a discussion about patriotism, and students talking with the counselor about career goals. There would be some individuals in the office asking how they could be included in the program, and if asked, some who comment that they're mighty glad they are.

Attaining skills that will help students make meaningful career choices can be in many fields such as science, photography, journalism, secretarial training, aircraft mechanics, general shop, home economics and many others which are offered in the Fairbanks North Star Borough School District.

Fairbanks Daily News-Miner – April 29, 1970

JUNIOR BANKERS – Joy elementary students Melinda Howard, left, and Linda Lienard, right man their city's First National Bank. The student's business is part of a city display entitled "World of Work" presented to parents at a PTA meeting early last week.

12—Fairbanks Daily News-Miner, Fairbanks, Alaska, Monday, June 5, 1972



PRESENT DESK – Four members of the industrial arts class at Lathrop High School presented Lew Dey, left, principal at Barnette Elementary School, with a desk for the school. The members, Randy Walker, Jon Meyer, Mike Kerekes and Ted Paisley, are participating in the Career Extension Program at Lathrop. Those in the program attend classes for half a day, then receive practical job training during the rest of the day. The desk was built as a Career Extension Center project to inject meaningfulness and practicality into the education program. Jerry Morang, right, of the career extension center, is the work experience coordinator for the program.

(Staff Photo)

Vocational guidance week

Students see, work in firms

By SUE LEWIS
Staff Writer

This week as the nation observed Vocational Guidance Week, students and adults in the North Star Borough School District are receiving training and counseling to help them in the work world.

Gov. William Egan has declared the week of Oct. 24 to 30 Vocational Guidance Week. The week is being observed throughout the nation. This year the theme is "Turn On . . . Tune In . . . Your Future."

Mrs. Barbara Pechan, career consultant for the school district, said the district has an active vocational program and has met with excellent community cooperation.

"We've found the community very willing to cooperate," she said. During the week she said they hope to demonstrate some of the vocational programs now under way in the district.

One program has placed 120 students on part-time jobs, giving them class credit to help toward graduation. Four vocational coordinators, Jerry Morang, John Pence, Jack Barham, and Doug Fowler, find jobs for the students, teach classes in job preparation and attitude formation, and follow-up job placement with both student and employer consultations.

Student jobs range from library aids to cake decorators to store clerks. Most of the jobs are half-day jobs, giving the students time to attend classes.

Interested students have the chance to view a total business operation in another program. Several local businesses have volunteered to show their operation to groups of students.

For example, Mrs. Pechan said 10 students a week tour the Fairbanks Medical-Surgical Clinic. "They check out not only health center operations and careers in medical fields, but filing, records, and so on. The Fairbanks North Star Borough gives the business education girls an intensive view of its offices."

BANKER-TO-BE — Robert Cook sorts mail at the First National Bank. Cook is in charge of the mail room at the bank. He spends afternoons there, and attends classes in the morning under the school district's work-study program.

A new program this year also takes a look at local businesses. The career inquiry class is formulating information on careers that applies to Fairbanks.

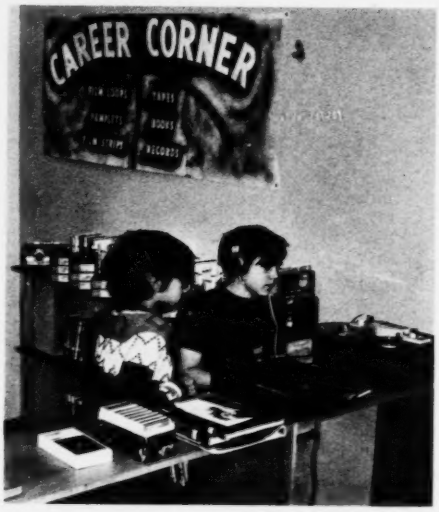
"We are looking for businesses that will allow students to take slides, interview them, find out about training, starting pay, and so on." Last year counselors from Main Junior High began this program, but students at the Career Extension Center this year will continue.

Eventually, they hope to make tapes and slide shows that can be shown to elementary and junior high students. These will be used in connection with a program of progressive career education from kindergarten through twelfth grade.

Junior high students have a career club at both Ryan and Main, and receive intensive counseling. Main counselors hope to see 100 students each week to help them with career decisions and training and attitudes. Ryan has established a career corner in the library which the career club will handle.

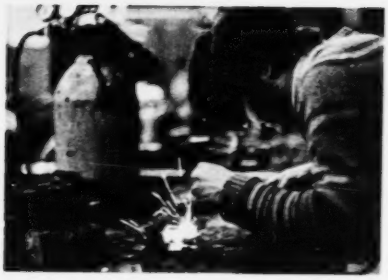
Adults receive career help too under the adult education program. This year 472 adults have enrolled in 29 classes. Although some of the classes are not career oriented, many will help adults retrain for new positions or advance from their present position.

Mrs. Pechan explained the district is always looking for additional community help. Part-time jobs are needed for the work-study program, and volunteers are welcome for business tours or as part of the career inquiry program. Anyone who wishes to participate may phone her at 456-5559.



An attempt has been made to set up a Career Corner in each school library. This picture is taken in the Ryan Junior High School library.

As an office assistant to the secretary in the Counseling Office, this student is learning the importance of accuracy in record keeping.



This student is working at acetylene welding, a skill learned in his vocational class.

A second try for drop-outs

It's no ordinary school. The blackboard and rows of seats are noticeably missing and there are no tardy bells here. Instead the gentle beat of the "Iron Butterfly" floats from a downstairs lounge.

The students aren't typical either. They lay sprawled across the carpet floor studying, or propped against a wall engaged in group discussion about politics.

Most of these students dislike or have already quit other public schools in the Fairbanks North Star Borough School District. This is a drop-out school, or more officially termed the Career Extension Service.

The newly opened Career Extension Service, under the direction of Irene Cleworth, is operated through a $100,000 federal grant and some state funds. Its specific aim is to encourage students to finish high school and at the same time prepare them for the work world.

The school is staffed by Mrs. Cleworth; two teachers, Joe Tremerello and Melinda Gordon; Counselor George Zeigler; and Barbara Pence, a work experience coordinator.

The student-teacher ratio is kept low to give each student individual attention and a liberal amount of freedom. In a typical arrangement, a student may sign a contract for a course, completing each phase of the agreement at his own pace until he receives credit.

Students are totally responsible for their own lessons, something new to most public school veterans. "Some think this is a soft way out," advised Mrs. Cleworth, "but actually it is much harder." Students, she says, are setting new patterns of discipline and display a willingness to learn.

Several students use the school as guidance to prepare for the GED, or high school equivalency test.

A work experience coordinator tests the student for career aptitude and then helps him find a job or choose a vocational course offered in the school district. School credit is received for on-the-job training.

"Our aim, says Mrs. Cleworth, is to give every kid some skill or vocation before he leaves us." Currently about one third of the class members are employed, unfortunately.

Mrs. Cleworth and several others conceived this work-study for the North Star Borough several years ago. They compiled a proposal showing the need for such a center, but the idea was rejected at the local and state level. She and some other professional people rewrote the proposal. "There is a big impetus toward vocational training," said Mrs. Cleworth, "so we molded our project around that concept." This July the grant application from the federal government became actual funding. Mrs. Cleworth resigned from her job as a Lathrop High School Boarding Home Counselor to become the first director.

Letters were posted to students who had dropped out or who had a record of poor attendance in their previous high school career. Half of those, about 25 students, were interested and enrolled.

According to the director, the school is filled to a capacity of 60. Forty kids are on the waiting list, and more apply every week.

One student, named Tina, had some definite things to say about her school.

"I love it here," declared the former Lathrop dropout. She had planned never to go back to high school, until she got an invitation to the Career Extension Service. Now Tina plans to stay at the Center to obtain her high school diploma.

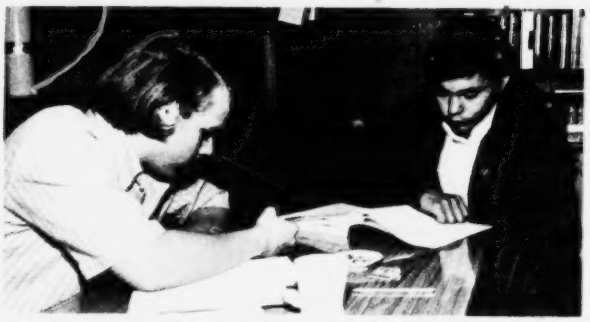
Several married students who dropped out a few months before graduation have returned to complete their education, sometimes bringing their babies into the school's relaxed atmosphere.

Of course, not all the students describe the Career program in such glowing terms, or benefit from it.

But most agree that a high school diploma is needed in the work world and have taken advantage of the program's freedoms and opportunities. As one kid put it, "What's left when you drop out of drop-out school?"

Mr. Joe Tremerello jokes with students Mike Campbell and Dallas Sears after a history consultation. The two are completing diploma requirements with individualized training. They also work in the community half of the day.

ALWAYS WILLING TO TALK – Irene Cleworth, director of the Career Extension Service, talks with a new girl who wants to enroll in the school. Mrs. Cleworth originally applied for a federal grant to initiate this program several years ago and calls the school "a dream come true."



WORKING TOWARDS GRADUATION – (Above) Once drop-outs, about 60 kids regularly attend the progressive school at the North Star Borough Career Extension Service. Jeff Steele (left) and Ames Parry come to study for their GED, or high school equivalency test, which will help them in the world of work.

Driggs Quietly Trains at Arctic Health and Research Center

By JACQUELINE GLASGOW
Staff Writer

Sheldon Driggs, an eighteen year old Eskimo boy from Wainwright, moves quietly and confidently through laboratory tasks at the vast and impressive Arctic Health and Research Center on the University of Alaska campus.

Alternating his time between the environmental engineering branch, the bacteriology lab, and the virology lab, Sheldon is being trained in basic laboratory techniques.

At the same time, he is completing his high school education in an extraordinary program arranged by the Career Extension Center of the Fairbanks North Star Borough School District.

Sheldon's story is a story of many community forces pulling together to help one very bright and exceptional young man.

His schooling is arranged through the Career Extension Center with the assistance of the University's tutorial service. His training is the outcome of the Native Laboratory Aid Program of the Arctic Research Center which is an extension of the U.S. Public Health Service.

Under special arrangements made through the Boarding Home Program, Sheldon lives on campus with the family of Dr. William Sackinger, a lively household since the Sackingers have six children of their own.

Spending money, important to any teenager, was arranged through the help of Leonard Hamilton at the Fairbanks Native Community Center. As part of the Work Experience Program, Sheldon is paid for the hours he puts in at the research laboratory

The story is all the more remarkable because Sheldon was very close to becoming one of the growing and alarming number of high school drop-outs.

Like many young people from bush areas, this young man had trouble relating to urban school life. After a dismal beginning at Lathrop, he was ready to give up and go home, and the BIA made arrangements to send him back.

Luckily one of the counselors at Lathrop referred him to Career Extension, presently located in a small building about a block or two from Lathrop.

As you walk into the Center, a sign stops you at the door: "CAUTION, HUMAN BEINGS HERE, HANDLE WITH CARE."

Originally funded by federal grant but now supported by both the state and the borough, Career Extension is an experimental program designed to make school extend beyond the school walls, out into the community.

Irene Cleworth, the school's director, pointed out that today's young people are no longer buying the old concepts of education.

In more and more cases, the gap between the student's concept of the world and the world the school presents him with widens until, at last, a split occurs.

The student, frequently discouraged, sometimes angry, and often hostile, drops out.

Mrs. Cleworth believes that if you can make school make sense, the kids will buy it. If school can relate to the larger world outside, in a job, for instance, you have a better chance of keeping that child in school.

Every student at Career Extension is helped to find a job in the community. He then works at his own pace under teacher direction, with no fixed class schedules to meet. Night study is arranged for those with daytime jobs.

This was the concept applied to Sheldon's case, although Sheldon is an exceptional student in that he does not attend any classes at the Center. All of his studies are done under the direction of his tutor, Jim Toston, consulting with the staff.

In June, Sheldon will take the GED examination (General Education Diploma), a high school equivalency test. If he passes, this will entitle him to a high school diploma and open other doors.

Sheldon already has the tentative offer of two jobs upon completion of his training. His primary goal is to go back to Barrow to work at the Navy's Arctic Research Laboratory.

Jerry Morang, Career Extension's vocational counselor, has a great amount of faith in Sheldon.

"I think he has distinct leadership qualities," Morang said.

Sheldon Driggs, laboratory trainee at the Arctic Health and Research Center on the University of Alaska campus, handles mice used in virology experiments with forceps and rubber gloves. The colony of mice must be kept highly sterile for responsive testing to viral injections.

"I have a feeling we will be hearing a lot more about this boy in the future. He wants to have some kind of impact on his culture, and he knows he needs the tools to do it. His diploma and the training he is getting here are just the beginning."

Last year the Arctic Research Center took five trainees into the program, of which only two finished. This year Sheldon is the only trainee and has the luxury of being coached privately by some of the Center's top men.

Sid Heidersdorf, in charge of the Laboratory Aid training program, personally spends about one and a half hours a day with Sheldon. Of course, he pointed out, such one to one counseling is very expensive and felt that next year they would either have to drop the program or expand it.

He felt that Sheldon would have benefitted from a little more contact and exchange of ideas with young people, going through training at the same time.

In the past few months, Sheldon has had complete responsibility for a large colony of very pure mice used in virology experiments. Don Ritter, one of the scientists of the virology section, instructed Sheldon on all phases of these experiments, in which mice were injected with small quantities of virus and carefully observed for follow-up studies.

So critical is the sterility factor that the mice are handled only with forceps and rubber gloves. The entrance to the virology section is closed off by means of two doors with an air lock between. You cannot open the inner door until the outer has closed behind you.

Ritter was also instructing Sheldon in the use of tissue culture as another means of testing, demonstrating the procedures with small glass flasks containing vero tissue (African green monkey).

In the weeks to come, Sheldon plans to work in the large animal section, where studies are made using black bears, coyotes, dogs, wolves, sheep, fox, pigs and rabbits.

Sheldon's trapping skills were being put to use as he and a friend set traps near the campus for rabbits to be used in the experiments.

When asked what per cent of Career Extension students were Native, Jerry Morang said, "I'm not sure, about the same ratio as Lathrop, I'd say, about 20 per cent."

"Mostly," he added, "these are urban Natives." He explained that usually the bush kids who come in on the Boarding Home Program when they fail to work out at Lathrop, are often reacting to all school as a bad experience.

At Career Extension, no grades are given. There is work to be completed. When the student completes the work, he gets credit.

One student may take two weeks, another two months. "I think our students work harder than anyone else," Mrs. Cleworth said. "They have to."

Sheldon works a full eight hour day at the Arctic Research Center. After supper, he goes over to his tutor's and prepares for his GED examination.

"Some people have the idea that drop-outs are slow students," said Mrs. Cleworth. "This is not true. They are just average. In fact, we have some very bright students who just want to do it their way. And they're doing it."

Another poster on the wall at the Career Extension Center reads: "You are and we are . . . a mystery."

Every child and every student is a unique being, full of as many mysteries as can be found under a laboratory microscope.

Sheldon Driggs is very definitely doing it his own way.

YOUTH PAGE

Daily News - Miner

KAREN PERDUE
Youth Page Editor

Career Extension's super plan

School and work mix well

Since the conception of the North Star Borough Career Extension Center last fall, 60 students who previously were dissatisfied with their school life have found an equilibrium between work and study.

The Career Extension Center's work-study program allows high school age students to hold down a full or part-time job, receive extensive training in a career and continue with their school curriculum.

Most of the students involved in the work-study program had previously quit or were contemplating dropping out, but with the new arrangement they can complete school at their own pace while holding down a job.

According to Jerry Morang, work experience coordinator, 34 local businesses and agencies are involved in training the students. Jobs range from teacher aides to store clerks to research assistants. All but five of the jobs are paying.

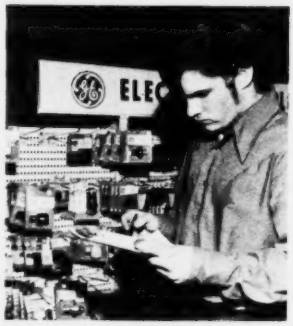
In several cases, students have landed specialized jobs that will insure them employment after graduation.

Sheldon Driggs, a native student who left Lathrop High School, is enrolled in an intensive laboratory training program under tutorship of the Arctic Research Lab. He is currently training in the water and air purification lab as a technician and has hopes of securing a job at the Barrow ARL, near his home, after graduation.

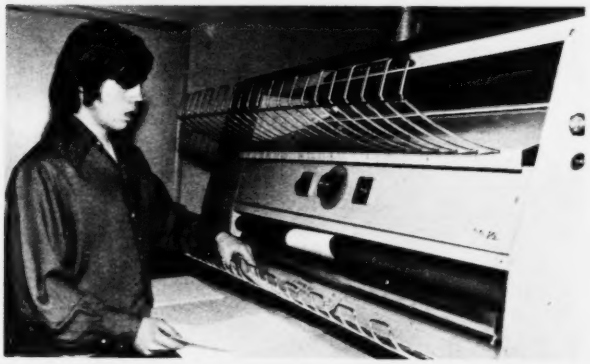
Rhonda Scott spends her days a a teacher's aide at Hunter School and another Career Extension student works with the Head Start program.

Don Trounce is learning how to chemically analyze oil at the Petroleum Distribution Facility near Fairbanks. Morang said that the project's success lies mainly in the cooperation received from local businessmen. The following businesses and agencies have provided job training stations for students: Sears, Foodland, Ft. Wainwright, University of Alaska, Market Basket, Head Start, Arctic Research Laboratory, Penney's, Northern Commercial, Sue's Cafe, Airport Cafe, Arctic Restaurant, Traveler's Inn, Petroleum Distribution facility, Koin King Laundromat, Fairbanks Native Center, Technical Supply, First National Bank, Hope Industries, Main Jr. High School, Hunter School, Barnette School, Lathrop High School, Ryan Junior High and Mike's Sign Shop.

Also included are Hillcrest Home for Boys, Interior Airlines, Independent Lumber, Tamarac Inn, Jacyn Modeling Agency, Shoe Mart, Fairbanks Medical Center, Safeway, and Interior Credit.



Career Extension Students — The Fairbanks North Star Borough Career Extension Center has created a program which allows its students to work full or part-time and still complete their schooling. Ken Chase, above, works every day at Independent Lumber and Lance Howard, below, has learned a new trade, photoengraving, at Technical Supply in Fairbanks. The program presently supports about 60 employed students.



FAIRBANKS, ALASKA, WEDNESDAY, DECEMBER 1, 1971

Public vocal about schools

Career center work lauded

About 50 persons turned out last night to praise and criticize aspects of Fairbanks' educational system, at a public work session held by the school board.

The meeting was the first of its kind held by the board, solely to hear public testimony. Board President Chuck Rees indicated such hearings would continue, probably on a twice-yearly basis.

Joe Vogler began the session by asking whether students in the North Star Borough district began the day with the pledge of allegiance, and suggested they do so. He was told many do, but saying the pledge is not mandatory. Several other speakers commented on this point also.

Two parents lauded the district's career extension center, a new program for students who have dropped out of school or became disenchanted with the traditional format.

Mrs. Ted Wolfe, 221 East Bentley Drive, said her son is "a completely different boy," and credited the center with the change. She said he intends to push for expansion of the program and felt more students should have the opportunity to be involved.

Ralph Miller told the board his daughter had "done a complete about-face" after nine years of frustration in school and also suggested the program be expanded.

Several Lathrop High School students spoke to the board. Johnny Green said he would like to see the board work with students on additional matters, and said he felt "the board was very fair in working with the students on revision of the student policies."

Dave Anderson said he had been denied an excused seventh period at Lathrop due to a policy there requiring students to be in class or at a job, and asked the board to change this policy. He was told to contact Principal Phillip Sword to see if his schedule could be arranged satisfactorily.

Another student asked the board to consider how student moods may be affected if a 12-month school year is initiated. He indicated many students are not in the mood for studying in the summer, and not in the mood for recreation in the winter.

Other parents and community members commented on subjects ranging from the language program to parent involvement to bus transportation. Many had questions rather than comments, and several praised efforts of the newly constituted school board.

Dear Mom, today in school I learned . . .

Baking business booms at Joy

By KAREN PERDUE

It was dubbed an experiment, but it turned out more like the biggest little business boom to hit Fairbanks since election year.

The Joy Elementary students in Mrs. Paula Campbell's sixth grade class cast aside their regular roles to become bakers-for-a-day. Not only did they sell out their labors of doughnuts, cakes, cookies and bread, but reaped a profit besides.

The junior businessmen were participating in a federally-funded program to supply children with vocational information that will help them decide on a profession in later life. The government supplies books, pamphlets and guidelines for teachers to follow.

At Joy School, teachers Fran Martin and Paula Campbell picked up on the idea and shaped it to fit their classroom situation.

To become a baker is a lot of hard work. They began with a week of intensive study of business principles. Tromping through Santa's bakery, they analyzed each phase of getting a product to market.

First they picked the recipes. That meant adapting some of the measurements to fit the demand. Carefully they recorded the prices of ingredients and then determined a fair but profitable price for each goods.

During that phase they learned the basic principles of bookkeeping, writing checks and buying wisely.

Phase II was promotion. The students set out to convince their classmates of their culinary talents with an elaborate ad campaign.

The baking day finally arrived. Teams of junior bakers, sleeves rolled up and faces beaming, turned out four kinds of bread, piles of doughnuts, three cakes and a panful of gingerbread cookies, all decorated ith excruciating care.

JUNIOR BAKERS — Sixth graders at Joy Elementary School learned about the baking profession last week when they set up shop and produced their own baked goods. Above doughnuts run the assembly line of, left to right, Larry Karella, Brian Church, Fred Williams, Jonette Cardon, Julie Foldoe and Arlene Svoboda. At bottom left, Jackie Delany stonily awaits the verdict of taster Steve Foster.

(Staff Photos)

The Joy School public soon got whiffs of the sixth graders' project and flocked to the make-shift bakery shop. Clerks rang up steady profits on the cash registers until all the goods that hadn't served as test models for the baking crews were quickly gobbled by the Joy Elementary consumers.

Mrs. Campbell estimates that the project was a great succes. "Every kid was so enthused about his job," she said, "that they didn't have time to goof off. I feel they've really gained a lot."

The sixth grade teacher said that some parents had frowned on the activity as "one big play-time", but she disagrees.

Although they may not have known it, the youngsters received training in work and reading, plus some applicable knowledge about the world of business.

Mrs. Campbell plans to pursue their endeavors until the class has built an entire city, complete with a water works system. They are using the profits from this project to finance another field trip, possibly to the airport where they will board airplanes and talk to pilots and stewardesses.

Other plans for both Mrs. Martin and Mrs. Campbell's classes include experiences at a radio station and a local bank.

Aid and guidelines for this vocational program are available for every school in the North Star Borough, but so far, little other interest has been exhibited.

CAREER EXTENSION'S FIRST GRADUATE – Roxanna Wright Brooks, shown here with her two children, Tammy and Raymond, is the first to graduate with credit from Fairbanks' Career Extension Center. Looking on are two of Mrs. Brooks' teachers, Joe Tremarello and Melinda Gordon.

Career Extension Unit tells of first graduate

The pert young woman above is Roxanna Wright Brooks, wife, mother of two and the first to graduate with credit from the Career Extension Center, Fairbanks' newest school. Here, students like Roxanna work toward obtaining a diploma or taking the GED.

Roxanna, a B-plus student left school in January of 1969 (in the middle of her senior year) and came to the center last fall hoping this was the way to complete her high school education and found that it was. Here she could complete her studies at her own pace on her own time schedule. Instruction is individualized and a strong personal relationship is developed between the staff and the student.

According to Joe Tremarello, one of Roxanna's teachers, "She not only did well academically, but was a great help in drawing out the quieter student as well."

Her English teacher notes that Roxanna has a talent for writing. "She draws much of her material from her own experience and embellishes it with her imagination."

Roxanna is not only a student, but an avid dog musher as well. She is active in the Alaska Dog Mushers Association and has raced four times in the Fairbanks area. At the end of this week, she is heading for Anchorage to participate in the Women's World Championship race there. She helps train her father's team. exercising and racing them.

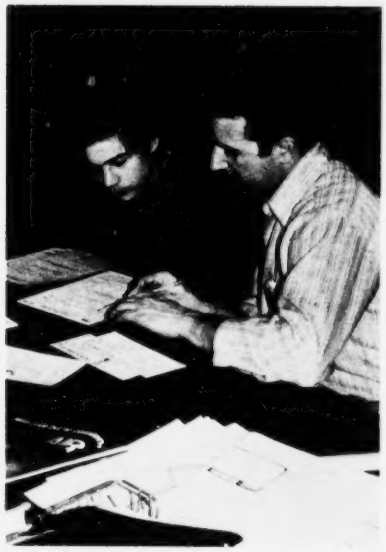
And all this in her spare time, for Roxanna helps her husband, Mike, with his business, Mike's Sign Center on Noble St., and takes care of her two children, Raymond age 3 and Tammy age 1.

The new educational program for Fairbanks is commonly referred to as the Career Extension Program and is now fully in operation and soliciting help from the community.

The 60 potential high school dropouts that comprise this vocationally funded program work on academic subjects half a day and receive job training the other half day. It is felt that meaningful employment should be an integral part of these young people's educational experience if they are to realistically be made ready for the world of work. It is in this part of the program that community assistance is direly needed. Part-time employment for its students is necessary to make the Career Extension Program work.

Those interested in helping these young men and women to help themselves by providing employment or information about employment, call: Jerry Morang, Work-experience Coordinator, at 456-5559.

The Work Experience Coordinator goes into the community to find meaningful career exposure stations. In this picture he is talking to the owner of a gift shop and discussing a work contract which is drawn up for every student to fit the particulars of the job.



One of the most important aspects of the Career Extension Center school is the individualized instruction each student receives. The courses are made as relevant to life as they can be. In this picture the instructor is helping a student understand his income tax problems.

This young high school student is receiving an opportunity for career exposure in working with childr4n in an elementary school setting.

Inter-District Conferences always entail a great deal of preparation and air travel since the distances between communities are too great to take time to drive. A number of our school district teachers and counselors have attended several career oriented career workshops and meetings throughout the Orientation – Work – Study Placement Program.

A full time counselor is on the staff of the Career Extension Center school. He gives personal, academic and career counseling, and is in charge of the Vocational Interest Surveys as well as other testing. He works closely with other counselors in the district, especially in the areas of providing career interest surveys as well as interpretation.

APPENDIX B

APPROVED CAREER ORIENTED FIELD TRIPS UTILIZED BY THE FAIRBANKS NORTH STAR BOROUGH SCHOOL DISTRICT DURING THE 1971-72 SCHOOL YEAR:

Safeway Supermarket

Alaska National Bank

The Fairbanks Daily News Miner

The Commercial Printing Company

The Fairbanks Community Hospital

Fairbanks Medical & Surgical Center

The Fairbanks Police Station

Wien Airlines

The U.S. Weather Bureau

International Airport Security Police

The International Airport Control Tower

International Coffee Shop

KFAR Radio Station

Eielson Air Force Base

The Municipal Utilities System Telephone Co.

Market Basket Supermarket

U.S. Government Experimental Farm

Woods Center - University of Alaska

Fairbanks Beauty School

Fairbanks Veterinary Hospital

KUAC Television Station

District Court - State of Alaska

The Alaska State Fish and Game Department

Fairbanks City Hall

Santa's Bake Shop

FIELD TRIP LIST (CONTINUED)

U.S. Post Office of Fairbanks

City of Fairbanks Fire Department

Alaska Railroad Roundhouse

KUAC Radio Station

Dean's Auto Glass & Body Shop

Bureau of Land Management Drafting Department

Fox Permafrost Tunnel - University of Alaska Project

University of Alaska Marine Science Department

McKee's Pig Farm

Husky Battery Company

Musk Ox Farm - University of Alaska

Cripple Creek Gold Mine

U.S. Weather Satelite - Gilmore Tracking Station

Fairbanks North Star Borough Library

University of Alaska Museum

University of Alaska Drama Department

Artic Health Research Center & Water Laboratory

University of Alaska Wood Center Food Service

Municipal Utilities Systems Power Plant

APPROVED CAREER ORIENTATION SPEAKER' LIST
(Names on file)

Taxidermist

Licensed Practical Nurse

Military Police

Chefs

Veterinarian

Fish & Game Dept.

Weatherman

Businessman

Lawyers

Scientist

City Councilman

Pilot

Baker

Fireman

Policeman

Dentist

Doctor

Nurse

Banker

Arts and Crafts People

Civil Engineer

Geologist

Civil Service Commission

Food Service Workers

Accounting

Union Representative

Journalist

Probation Office & Social Service

Medical Secretary

Employment Service

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Orientation-Work-Study Placement Program

Fairbanks North Star Borough School District
Fairbanks, Alaska

The schools
and the community
work together
to provide students
with
career information
and
on the job training.

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Elementary Career Orientation

★ In-Service training, materials and coordination necessary to implement the Philadelphia Plan of career education in every elementary school in the district.

★ Provide the instruction and materials necessary to establish a career resource center in each elementary library.

★ Provide a clearing house for all career related material from all sources in the district. (i.e. a-v material, material in print, career speakers and career field trips.)

Secondary Career Orientation

★ A program by which students are exposed to careers related to each of their academic subjects.
★ Self-awareness and occupational exploratory courses at the junior high level.
★ A career resource center in each secondary school.
★ Vocational interest testing service.
★ Career Education in-service training for all secondary teachers.
★ Liaison service for district wide career related sources such as speakers, films and occupational exposure trips.

Research

★ Paren' and employer surveys—to determine progress in behavior and academic achievement.

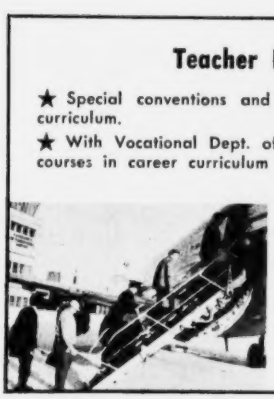
★ Maintain an on-going survey of local employment needs.

★ Supplement past studies of local school drop-outs with recent information and statistics.

CAREER DEVELOPMENT K-12

Teacher In-Service Training

★ Special conventions and conferences for development of career curriculum.
★ With Vocational Dept. of Education in Juneau develop university courses in career curriculum and occupational information.



★ During school year arrange for guest teacher from outside Fairbanks to help interested staff develop career curriculum.

★ Regular meetings with departments and individual teachers to expand curriculum oriented career education.

Develop Employability of Students

★ Individual programmed courses in employment characteristic development.
★ Through testing and interest surveys, students learn more about themselves in relation to chosen, realistic goals.
★ Through relating academic and vocational subjects, students are helped to attain and retain their interest in education.
★ Through counseling and on-the-job follow-up, students are helped to develop appropriate behavior that is acceptable to employers.
★ Inform students of the options open to them in relation to abilities, interests and opportunities.

Summer Programs

★ Job placement and on t
training.
★ Enriched, unique expe
for students to broaden their
ledge of their environment—e
ically, ecologically, and socia
★ Career counseling
★ Preparation for the High
Equivalency Test.

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Secondary Career Orientation

★ A program by which students are exposed to careers related to each of their academic subjects.
★ Self-awareness and occupational exploratory courses at the junior high level.
★ A career resource center in each secondary school.
★ Vocational interest testing service.
★ Career Education in-service training for all secondary teachers.
★ Liaison service for district wide career related sources such as speakers, films and occupational exposure trips.

Work Experience Cooperative Program

★ Provides career related part-time employment for vocationally oriented students.

★ Correlates employment, career goals and academic endeavors into an integral program for each student.

★ Develops lines of communication between education and the world of work.

CAREER DEVELOPMENT K-12

Career Counseling

★ The staff of the Work-Study-Orientation Program is available to all counselors and teachers of the school district, and parents.

- Career materials and vocational interest surveys are made available.
- Vocational surveys are interpreted.
- All young people who come to the Career Extension Center (even non-students) can receive career and personal counseling.
- The staff participates in the local Counselor's Association, sharing ideas for Career Counseling.

elop Employability of Students

vidual programmed courses loyment characteristic devel-

ugh testing and interest sur- tudents learn more about ves in relation to chosen, goals.

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Summer Programs

★ Job placement and on the job training.

★ Enriched, unique experiences for students to broaden their knowledge of their environment—economically, ecologically, and socially.

★ Career counseling

★ Preparation for the High School Equivalency Test.

Career Extension Center

★ A separate facility with a program designed to help students who have dropped out of school.

- Individualized instruction in academic subjects.
- On the job work experience.
- Students work toward a diploma or prepare themselves for the High School Equivalency Test.
- Extensive career and personal counseling.
- Career Orientation UniPacs and career interest surveys are available to all students.

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This Orientation-Work-Study Placement Program is developed to integrate career oriented services and materials into existing counseling and course offerings. The goals are to help each student learn more about himself as well as attain career information and skills that have meaning to him.

A special emphasis is to help the potential dropout student achieve success and gain information that is relevant to him and to prepare him with the knowledge, skills and attitudes for success in the world of work.

". . . education should turn out the pupil with something he knows well and something he can do well . . ."

—ALFRED NORTH WHITEHEAD, 1917

CERTIFICATE OF APPRECIATION

_____
Name

_____
Name of Business

For sharing yourself, your time, and your knowledge of the career in which you are engaged with the students of _____ _____, we present this certificate of appreciation.

The service you have given is invaluable in bringing the community and school together, and for making education more relevant as it is related to the world of work.

Signed _____

_____

Work Study Orientation Placement Program
CAREER EXTENSION CENTER
Fairbanks North Star Borough School District

INTRODUCING

work-study orientation placement program

A new educational program for Fairbanks which is commonly referred to as the Career Extension Program is now fully in operation and soliciting help from the community.

The 60 potential high school dropouts that comprise this vocationally funded program work on academic subjects half a day and receive job training the other half day.

It is felt that meaningful employment should be an integral part of these young people's educational experience if they are to realistically be made ready for the world of work.

It is in this part of the program that community assistance is direly needed. Part-time employment for its students is necessary to make the Career Extension Program work.

If you can help these young men and women to help themselves by providing employment or information about employment, call:

JERRY MORANG
Work-experience Coordinator

456-5559

CAREER EXTENSION CENTER

1416 Gillam Way
Fairbanks, Alaska 99701

1. Each Student will be evaluated by the Job Coordinator twice Monthly and will receive a rating by his employer.

2. Unless unusual circumstances warrent a different arrangement, the number of credits received for work experience shall be determined by the number of hours worked successfully. For example:

   100 hours = ½ credit
   200 hours = 1 credit
   300 hours = 1½ credits
   400 hours = 2 credits
   500 hours = 2½ credits
   600 hours = 3 credits

   A student will not receive credit for the hours worked unless on a regular basis, he provides the Job Coordinator with some proof of continued employment.

3. It is the responsibility of all students to furnish the pertinent job information to the Job Coordinator, such as:

   a. change of job
   b. hours of job
   c. working hours changed

   Failure to do so could result in no credit.

4. Job Coordinator will only help those students that have appropriate dress and apperance.

   All students receiving credit for work-experience will be assigned career related independent study to be completed before credit is awarded.

B 6

CAREER EXTENSION CENTER

Fairbanks North Star Borough School District
1416 Gillam Way
Fairbanks, Alaska 99701

Name....._____

Employing Firm... ....._____

Job Title....._____

Extent of Work....._____

As a student o. the Career Extension Center it is understood that my work experience is to be an intergral part of my total educational process. Upon meeting the following stipulations I will receive 1½ credits for semester in work-experience applicable toward graduation requirements:

a. Maintain satisfactory standing in my employment as evaluated by my supervisor.
b. Maintain satisfactory standing in the academic areas pursued within the school part of the program.
c. Complete career exploratory assignments, relating to my employment and interests, as designated by the work-experience coordinator.

_____
(Student)

_____
(Work Experience Coor.)

B 7

LATHROP HIGH SCHOOL, RYAN JUNIOR HIGH SCHOOL
FAIRBANKS NORTH STAR BOROUGH SCHOOL DISTRICT

Date _____

CAREERS EXPOSURE CONTRACT

Student Name _____
Exposure or Training Station _____
Training Title _____
Hours & Extent of Exposure _____

In an attempt to make in-school activities more relevant and to assist students in having opportunities to explore various careers it is proposed that the above named student be released from part of the school day to receive on-the-job career exposure. This training is to be equivalent to the regular school credit on the basis of one-half (½) credit per 100 hours of exposure with a maximum of three credits per school year. The maximum time at any single exposure station will vary according to circumstances but will not exceed 300 hours. Upon reaching that limit the student will be placed in another career exposure station or the existing one will be converted to a training position subject to a new contract.

It is understood that experience received is to be an intergral part of the students educational process and he will be responsible to both school and the on-the-job supervisor and the following criteria must be met:

(a) Maintain satisfactory standing in the employment setting as evaluated by the supervisor.
(b) Maintain satisfactory standing in the academic areas pursued within the in-school phase of the program.
(c) Complete career exploratory assignments relating to the training as designated by teachers and counselors.
(d) Maintain weekly contact with the counselor or career consultant to discuss exposure experience.
(e) Complete the following objectives as designated by counselor, career consultant and job supervisor:

(List of specific behavioral objectives to be met)

USE BACK OR SECOND SHEET

Student _____

On-the-job Supervisor (employer) _____

Parent _____

Counselor _____

B 8

TRAINING AND EXPOSURE STATIONS UTILIZED BY CAREER EXTENSION CENTER STUDENTS DURING THE 1971-72 SCHOOL YEAR

Clerical Aid	Hope Industry	2
Library Aid	North Star Borough Library	2
Truckers Aid	North Star Borough	2
Checker	Market Basket	3
Lab Ass't	Petroleum Lab On Base	2
Stocking Clerk	Northern Commercial	1
Courtesy Clerk	Safeway	3
Teacher Aid	Headstart	3
Custodian	North Star Borough	5
Clerical	1st National Bank	2
Vet Helper	Dr. Murry	1
Clerical Aid	Hunter School	1
Laundromat Attendant	Koin King	1
Library Ass't	Barnette School	1
Mechanics Helper	Kerslake Const.	1
Courtesy Clerk	Foodland	4
Night Custodian	University of Alaska	1
Night Custodian	Geo. Phy. Lab	1
Mechanics Helper	Interior Airlines	1
Carpenters Aid	Hillcrest (temporary)	3
Custodian	Tamerac Inn	1
Maintenance	Travelers Inn	1
Model	Jacyn Agency	1
Stocker	Market Basket	3
Bell Boy	Travelers Inn	2
Courtesy Clerk	Market Basket	3
Nurses Aid	Ryan Junior High	1
Cafeteria Aid	Denali School	1
Maintenance	Main Junior High	1
Snack Bar Cook	Safeway	2
Secretarial Aid	Native Center	1
Mechanic Aid	Andy's Auto	1
Stocker	Sears	2
Filer	Sears	1
Teacher Aid	Hunter School	2
Teacher Aid	Barnette School	2
Gas Station Attendant	Ron's Chevron	1
Floral Design Trainee	Northward Flowers	1
Secretarial Aid	Curriculum Service Center	1
Food Service Aide	Lathrop H.S.	2
Bookkeeper	Tesoro	1
Gas Station Attendant	Tesoro	2
Laboror	Northland Gardens	2
Seamstress Trainee	Mukluk Shop	1
Sales Girl	Shoe Mart	1
Waitress	Grubsteak	1
Waitress	Netas	1
Gas Station Attendant	On Base	1
Hospital Aid	Fbks Community Hospital	2
Nursing Home Aid	Private Home	1
Delivery Boy	Alaskan Floral	2
Cafeteria Attendant	Int. Airport	1

TRAINING STATIONS (Continued)

Fireman Trainee	City Fire Dept.	1
Social Worker Aid	Youth Inc.	1
Drive-In Attendant	King Leos.	2
Drive-In Waitress	A & W.	1
Sec. Aide	C.S.C.	1
Med. Lab Trainee	Fbks Med. Clinic	1
Mialman	Alaska State Bank	2
Mech. Ass't	Gov. Motor Pool	1
Mech. Ass't	St. Hiway Dept.	1
Custodian	Foodland	1
Biologist Ass't	Fish and Game Dept.	1
Waitress	Artic Cafe.	1
Station Announcer Trainee	KFRB Radio Station	1
Library Aide	U. o A.	1
Lab Aid Trainee	Artic Research Lab	1
Photo Engraver Trainee	Technical Supply	1
Bookkeeper	Mikes Signs	1
Clerk	Willies Mens Store	1
Clerk	Penneys	1
Lab Assistant	Artic Research Lab	1
Mech. Helper	A & B Auto Sales	1
Mechanic	Avis Rent-A-Car	1
Secretary Aid	U.of A.	1
Mech. Helper	Burgess Contstr.	1
Secreta y	Sourdough Express	1
Secretary	M.U.S.	1
Secretary	Interior Credit Bureau	1
Truckers Aid	Weaver Brothers	1
Consessions Operator	Ft. Wainwright	1
Electronics Trainee	Alaska Electronics	1

SUMMARY OF RESULTS OF CAREER EXTENSION CENTER QUESTIONAIRE
PREPARED AND ADMINISTERED BY
PARENTS OF CAREER EXTENSION CENTER STUDENTS

1. What are your feelings about your child attending the career Extension Center? (Good - Indifferent - Dislike)

97%	Good	0%	Dislike
3%	Indifferent	3%	O.K.

COMMENTS RECEIVED: "This is the best schooling he has ever gotton." "I think it is a big help or the young people." "The very best." "Very good." "Guess its O.K." "Would not be in school otherwise." Fine youngsters choice was'nt getting what needed at Lathrop."

2. What was your students attitude toward school last year? (Good - Indifferent - Unsatisfactory)

15%	Good	62%	Unsatisfactory
18%	Indifferent	5%	No Answer

COMMENTS RECEIVED: "He only went half the year." "He had gone to another state and still didn't like it." "Did not like to attend certain classes." "Never liked school." "Good she did real well." "Missed alot of school." "Unable to fit into regular school situation." "Unsatisfactory at Lathrop first semester fair in Anchorage." "Unknown."

3. What is your students genersl attitude toward school this year? (Good - Indifferent - No Change)

85%	Good	3%	No Change
6%	Indifferent	6%	No Answer

COMMENTS RECEIVED: "Better than 'Good'." "He likes to go now." "Better." "Improvement - MUCH." "Some days good some days bad." "Really likes the school." "Goes in spurts - Works 8 hours day-gets tired." "Very good." "Taken on responsibility himself in following through." "Attitude once shes there is good -- no discipline herself." "No change - can cope better." "Problem at Lathrop - ;earns quick and felt held back."

4. Does your student attend school more regularly than in the past? (Yes - No - Do not know)

85%	Yes	0%	Do Not Know
9%	No	6%	No answer

COMMENTS RECEIVED: "She attended regularly before." "Definately." "Enjoys going." "Yes - a lot more - very willing." "Has no self-discipline - needs guidance by others than his parents." "No better." "Yes does now." "Last year orced - this year looks forward to attending." "Enjoys being teachers aid."

Questionnaire (continued)

SUMMARY OF RESULTS OF CAREER EXTENSION CENTER QUESTIONAIRE
PAGE TWO

5. Does your student attend school more willingly than in the past? (Yes - No - Do not know)

100% Yes	0% Do not know
0% No	

COMMENTS RECEIVED: "Yes we have no problems now." "Enjoys it when she gets there." "Yes -- but more determined."

6. Indicate change of attitude in the following areas:

School (Improved - No change - Worse)			
97% Improved	3% No change	0% Worse	0% No answer
Family (Improved - No change - Worse)			
62% Improved	26% No change	3% Worse	9% No answer
Adults (Improved - No change - Worse			
65% Improved	26% No change	0% Worse	9% No answer
Students (Improved - No change - Worse)			
56% Improved	32% No change	0% Worse	12% No answer

7. Should the Career Extension concept be (Continued - Expanded - Dropped)?

50% Continued	0% Dropped
35% Expanded	15% Continued & Expanded

COMMENTS RECEIVED: "I think it should expand all it can." "Very definately." "Expanded if possible." "Does not like S.F.O. program --many problems." "The school should be expanded -- but not to one large building. It would lose what it has gained by not having the closeness of student teacher." "Expand -- very good idea." "Possible expand definitely keep it." "Have to have this for certain students." "Expanded more keds could go." "Do not expand unless adequately staffed." "School should be for students who do not fit the norm -- not for everyone who just likes the freedom." "Felt they were domineering at Lathrop -- likes the pace he can work at the Career Extension." "Best thing that's happened to our school system."

8. Should the physical plant be changed? (Expanded - Adequate - Improved)

50% Expanded	6% Expanded/Improved
24% Adequate	6% "No comment"
6% Improved	8% No answer

COMMENTS RECEIVED: "Bigger: We would like for them to have more." "Hadn't seen plant -- no comment." "Probably present success due partially to non-formal building." "Not familiar with program." "It isn't as big as it could be." "Accommodate more students." "Could use more room." "Perhaps expanded at later date." "Made available t more kids." "Don't ask me to much -- may drop it. As a parent I am satisfied." "Don't get too big!" "Small classes with students moving on is best situation." "no comment."

SUMMARY OF RESULTS OF CAREER EXTENSION CENTER QUESTIONAIRE
PAGE THREE

ADDITIONAL QUESTIONS AND/OR COMMENTS: "If --- could get more help with his Algebra he would be more interested even than he is now. He passed all the other tests that are required for the GED test." "--- has had mono since December. Plans to return." "This is the first time our son has had any desire to learn or work towards a diploma. He speaks very highly of every one at the Center that has been working with him." "My husband and I both believe that the Career Extension Center is a worthwhile project, and we are grateful to the fine people who are giving this time and effort to help our children." "Working after school. Working summer." "Age 16, Father has summer job for son if he wants to work for Father. Be glad to help if needed." "Summer school should be offered if there are enough students who really are going to attend on a daily basis." "--- has nothing but praise for the teachers and school." "Doesn't have to lie this year." "We feel it is one of the exceptional federsl projects in Fairbanks. We feel if it wasn't for the Career Extension Center educations and counselors our son would not be attending school." "Seems to work better for --- being able to go at her own pace." "Hope the school confines enrollment to kids who can't make it at Lathrop and not open to kids who like this system of education better but can succeed at Lathrop." "Has helped him grow up -- he listens to us and we to him. Has learned to fit in. Career Extension has done more for my son in 5 months than Main and Lathrop did in three years." "Would like to know when daughter is attending school -- attendance records?" "This opportunity is almost to late for --- but had it been available two years ago it would have saved heartaches and a lot of built-up hostlity towards authoritarian people and structures. We, his parents, are very grateful to those who worked to bring the Career Extension concept of education to Fairbanks. Having the pressure of Lathrop's necessary regulation's off -- has aided all the family to deal more effectively with his real problems which isn't smoking!" "Demand more from students. Most of them are lacking in self-discipline and need to be led into better working habits. Set certain attainable goals for students and then insist on compliance." "Seems very eager to attend. Friendliness of teachers; seems so willing to help him --."
"--- is staying with Aunt and Uncle and was living in the Bush prior. Correspondence school. Due to working hours of all the family difficult to determine family improvement - attitude - but feels a definite change in the few weeks in the school." "Like atmosphere -- it's very encouraging -- feel more at ease with themselves."
"Asked what the feeling was about the program as far as School Board -- she is very much in favor of the school and hopes it will continue in the future."

NOTE: SOME OF THESE COMMENTS WERE RECORDED BY INTERVIEWS WHO VOLUNTEERED TO CALL SOME PARENTS AND GUARDIANS WHO HAD NOT COMPLETED A QUESTIONAIRE BEFORE.
--- indicates a name that has been delated.

CAREER EXTENSION CENTER
Fairbanks North Star Borough School District

Name Jean Houser
Birthdate 9-18-54

STUDENT TESTING PROFILE

Tests (See tests in folders for full results)			Percentiles
INTEREST TESTS:			
Ohio Vocational Interest Survey	} high	1 Applied Tech	
		2 Numerical	
		3 Appraisal	
	} low	1 Clerical	
		2 Manual	
		3 Machine Work	
Date 12-71			
Strong Vocational Interest Battery	} high	1 Law - Politics	
		2 Bio - Sciences	
		3 Writing	
Date 10-71			
Kuder Preference	Highest	Literary	
	Lowest	Clerical	
Date 10-69			
APTITUDE			
Differential Aptitude Test	Verbal Reasoning	85	
	Numerical	80	
	Abstract Reasoning	70	
	Clerical	60	
	Mechanical	70	
	Space Relations	80	
Date 9-68			
ABILITY			
Test OTIS	Verbal Score	--	
	Performance Score	--	
	Full Score	--	
Date Given 4-69		118	
ACHIEVEMENT TEST			
IPAT	Reading Rec.	85	
	Reading Comp	90	
(Grade Level Norms)	Spelling	65	
	Math	70	
	General Info	85	
Previous cumulative G.P.A.		1.80	
Career Education Center G.P.A.		2.90	
PERSONALITY			
16 Personality Factors		(STEN)	
Emotional Stability		4	
Socially Venturesome		7	
Conscientious		3	
Self Sufficiency		8	
Tension Level		5	

OBSERVATIONS - COMMENTS

5-72 Profile interpreted to student
5-72 Parent conference with student to discuss profile

RECOMMENDATIONS

Achievement and personality tests will be re-administered upon student's exit from program January, 1973

CAREER EXTENTION CENTER

1416 Gilliam Way

INFORMATION FORM

OCCUPATIONAL SURVEY – FAIRBANKS, ALASKA

FIRM NAME: _____ **INTERVIEWER:** _____

ADDRESS: _____ **REPORTING OFFICIAL:** _____

PHONE NO.: _____ **POSITION:** _____

1. occupation (job titles)	2. total current employ-ment	3 employ-ment 1 yr ago	4. employ ment 2 yrs ago	5. current openings	6 is this occupation hard to fill		7. salary range	8. minimum education required				9. what formal voc-trng req.			10. is prior experience required	
								A	B	C	D	A	B	C		
								less than HS	HS grad	JC grad	others	formal skilled training	formal on the job	formal apprentice-ship		
												how much type	how much type	how much type		

11. DO YOU DESIRE EVENING ADULT COURSES DESIGNED TO UP-GRADE YOUR EMPLOYEES? YES _____ NO _____

IF YES, WHAT SUBJECTS _____

12. WOULD YOU EMPLOY PART-TIME CO-OP STUDENTS FOR 15-25 HOURS PER WEEK YES _____ NO _____

13. WHAT ARE THE MOST COMMONLY OCCURING WEAKNESSES FOUND IN JOB APPLICANTS-(BE SPECIFIC)

_____

_____

_____

_____

COMMENTS _____

_____

_____

Career Extension Center
Fairbanks North Star Borough School District
1416 Gilam Way
Fairbanks, Alaska 99701
April, 1972

To: All principals and teachers

From: Career Extension Center

Re: Career Education

Name _____

School _____

Grade or
Subject _____

The following questions were designed to acquire information necessary to develop career education plans for the next school year. Please respond as speciffically as possible and return the form to your principal or the Career Extension Center by Friday April 28th.

(1) List the Career Orientation activities, units or techniques you have used during this school year. (Please attach supplementary material used.)

(2) List the career orientation activities, units or techniques you would like to be developed for use in your classroom.

(3) How can career orientation activities, used in your classroom be implemented in the following curricular areas?

Language Arts

Math

Social Studies

Science

(4) What specific problems or successes have you experienced from career related activities used in your classroom.

(5) List in order of priority five career related field trips and speaders that would be most beneficial for your class.

Field Trips	Speakers
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

(6) Would you attend a Summer Workshop in Career Education this summer? _____

During the School Year? _____

What should be included in a workshop of this nature? _____

B 16

PLEASE FILL OUT THIS AS COMPLETELY AS POSSIBLE.
YOU DO NOT HAVE TO PUT YOUR NAME ON THESE SHEETS.

(1) Age _____ (2) Sex _____ (3) Birthdate _____

(4) Do you live with your parents? (or whom do you live with?)

(5) If not with your parents - why not?

(6) If not living with your parents - where are they?

(7) What is the educational background of your parents and/or others who have an influence on you in place of parents.

(8) What is the occupation of your parents? What is the occupation of those with whom you live? (if you are not with your parents.)

(9) Is this your father's first marriage?

(10) Is this your mother's first marriage?

(11) Does your family talk things over with each other very often?

(12) To what degree would you say your family understands and accepts each other?

(13) Do you feel you understand and accept them?

(14) Did you ever go against your parents in your choice of friends, or don't you think they cared who your friends were?

(15) What usually happens if your parents oppose a friend?

(16) Who is the most influential person in your life?

(17) How long have you lived in Fairbanks?

(18) Where were you born?

(19) If you work - how much do you earn?

(20) Do you own a car?

(21) What job do you have now? Is it in an area in which you hope to continue? Or do you have something else in mind?

(23) Have you ever run away, or just left home? Why?

(24) In 10 years why do you hope to be doing?

(25) If you needed help and advice to make a big decision, to whom would you go for that advice?

(26) Have you ever been arrested? How often? Why?

(27) In what grage, or what age did you begin to lose interest in school?

(28) When did you actually drop out of school?

(29) If your best friend told you he was going to drop out of school- what would you tell him?

(30) Exactly where are you in your education? (grade -credits - etc.)

(31) Was there any particular thing that caused you to dislike school?

SUGGESTIONS:

Too hard?
Too boring?
Pregnant
Married
Not learning anything
Skipped to often
Needed to work for money
Didn't like the teachers
Didn't like the rules
Just a bad feeling
Felt "dumb"
Can't read very well
Health
Frustrated with school in general
Frustrations and problems at home
Felt out of place
Teachers too far ahead and moving too fast

Use space below & on the back to explain your feelings about your past experiences in school. You can check or circle suggestions at the left that describe your feelings.

APPENDIX C

CAREER INQUIRY

Career Inquiry is a 1/2 credit course which was developed to facilitate the preliminary procedures used by employers when hiring new personnel. The procedure used to obtain unemployment insurance is included along with the rationale involved. Monographs of the major work areas are provided for student oriented projects.

OBJECTIVES

1. Each student will be required to write and complete the following:

   A. A self-inventory worksheet
   B. Three personal references and addresses
   C. Three hobbies
   D. Four courses which may be pertinent to a job application
   E. Six possible sources for finding a job
   F. A federal application
   G. A state application
   H. Four subjects to be avoided while being interviewed
   I. Eight questions a prospective employer may ask
   J. Ten reasons why job applicants may be rejected
   K. Three areas open to prospective employees with court records
   L. Three areas not open to prospective employees with court records
   M. The rights and responsibilities of a union member
   N. Five situations which may seem unusual the first day on a job
   O. An unemployment insurance claim form
   P. An "Intrastate Benefit Rights Questionnaire"

2. Each student will be required to participate in a mock interview session with the instructor, with emphasis placed upon the development of self-confidence.

3. Each student will be required to take the Strong Vocational Interest Survey or the Ohio Vocational Interest Survey.

4. Given the Occupational Exploration Kit (O.E.K.), the student will be required to complete the workbook.

5. Each student will be required to research four work interest areas provided in the O.E.K.

6. Given an "Occupational Monograph" provided by the instructor, the student will be required to use the local library to research one occupation of his choice.

Reference Materials

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Wolfbein, Seymour L., and Goldstein, Harold, Our World of Work, Chicago: Science Research Associates, Inc., 1971.

Worthy, James C., What Employers Want, Chicago: Science Research Associates, Inc., 1971.

Belanger, Lawrence, Coordinator California State Department of Education, Occupational Exploration Kit, Chicago: Science Research Associates,Inc., 1971.

CAREER EXCHANGE PROGRAM
LATHROP HIGH SCHOOL

Dear Parent:

In an attempt to make in-school activities more relevant and to help students have opportunities to explore the World of Work, the following pilot program in career exposure is proposed. Jack has expressed a desire to participate in this program which is dependent upon your active cooperation.

The basic idea is an exchange program with you and another parent whose son or daughter is a participate. Your willingness to participate will make it possible for Jack to have an option on taking an active part.

The projram is for Jack to be a guest o. another working parent at his job. The period of time would be for one half day for three to five days, with an option on wether part to break the contract at the end of three days. The time of day could be altered so the least amount of disruption in the students dtudies would exist. Your role would be that of a host to one of the students whose father is assisting Jack in becoming acquainted with his career.

The purpose in having the student be a quest for a three to five day period of time is so the student may closely experience the career. This length of time also provides an opportunity for you to express concepts that might not be mentioned in a short interview.

Enclosed you will find a l st of questions that will be asked of Jack. There is also a list of guidelines for the student concerning their regular schooling. Last is a questionaire that is needed for information concerning your attitudes toward this idea and information concerning your career.

Thank you for taking the time to read this letter and responding to the questionaire. If in any way I can be of service to you or answer any question that Jack has not been able to answer, please call me in the evenings at 456-7081.

Thank you,

C-3

(continued)

CAREER EXCHANGE AGREEMENT

Exchange
Parent . . . . . _____

Student. . . . . _____

1st day. . . . . _____ Time _____

2nd day. . . . . _____ Time _____

3rd day. . . . . _____ Time _____

4th day (Optional). . _____ Time _____

5th day (Optional). . _____ Time _____

1. The parent agrees to demonstrate his vocation and assist the student in becoming acquainted with his vication.
2. The student agrees to attend the vocation during the designated t mes and prepares himself to respond to the questionaire.
3. The parent and student agree to meet on the first three days of the five days with the understanding that either may request termination upon the third day. If neither request terminat on then completion o: the final two days is expected. Termination may be expressed orally to the instructor and the other party involved.
4. Both parties agree to complete the questionaire at the conclusion of the observat.on period.
5. The student agrees to complete all regularly scheduled assignments in all classes which conflict with the observation.
6. The parent and student agree to resolve any transportation problems which occur.

Exchange
Parent Signiture _____ Date _____

Student Signiture_____ Date _____

Teacher Signiture_____ Date _____

OBJECTIVES OF STUDENT OBSERVATION OF PARENTS IN OCCUPATIONS

1. The student will state the characteristics of the vocation as perceived by the student before the observation by answering a questionaire.

2. The student will state the characteristics of the vocation as perceived by the student after the observation by answering a questionaire.

3. The student will state at least three mathematics problems in which they have had the mathematical background to solve.

4. The student wil state whether there are any mathematical problems associated with the vocation which they at present do not have the background to solve.

5. The student will state the difference in the anticipated occupation and the perceived vocation by observation.

6. The student will state the characteristics of the vocation which are most appealing to him.

7. The student will state the characteristics of the vocation which are the least appealing to him.

STUDENT OBSERVATION QUESTIONAIRE

State what per cent of the day is spent in the following activities.

1. Standing _____
2. Sitting _____
3. Walking _____
4. Driving _____
5. Talking
   - Social conversation _____
   - Business conversation _____
6. Writing _____
7. Reading _____
8. Doing mathematics oriented problems _____
9. Doing non-mathematics oriented problems _____
10. In social contact _____
11. Removed from social contact _____
12. Working with people _____
13. Working with objects _____
14. Working with ideas _____
15. Engaged in psychomotor skills _____
16. Engaged in mental skills _____
17. What is the number of persons contacted? _____
18. Name three problems associated with the vocation which you have the mathematical background to solve.
19. Name three problems associated with the vocation which you do not have the mathematical background to solve.
20. State what mechanisms are used to bread any routine patterns o the vocation.
21. What per cent of time is spent in time not relevant to the job description?
22. Would you participate in this program again if given the opportunity?
23. What suggestions do you have to improve the program?

PARENT QUESTIONAIRE

State what per cent of the day is spent in the following activities.

1. Standing _____
2. Sitting _____
3. Walking _____
4. Driving _____
5. Talking
   Social conversation _____
   Business conversation _____
6. Writing _____
7. Reading _____
8. Doing mathematics oriented problems _____
9. Doing non-oriented mathematics problems _____
10. In social contact _____
11. Removed from social contact _____
12. Working with people _____
13. Working with objects _____
14. Working with ideas _____
15. Engaged in psychomotor skills _____
16. Engaged in mental skills _____
17. What is the total number of persons contacted? _____
18. State three problems associated with the vocation which have the mathematical background for a high school student.
19. State three problems which have a college level of mathematics requirement.
20. What level of education does your vocation require?
21. Would you participate in this program again if given the opportunity?
22. What suggestions do you have to improve thr program?

OUTLINE TO ROOM TO GROW PROGRAM

TEACHER GUIDED PROJECTS

I. ORIENTATION
Orients pupil to aims of the program.

II. MEANING OF "ROOM TO GROW"
Assists the pupil to understand the relations and the influence of home and school on the person and his career

III. WHO AN I?
Encourages feeling of self-awareness and self-worth

IV. WHAT I LIKE TO IN MY FREE TIME
Continues to stregthen the self-concept by stressing the individuality of the person

V. WHAT I WANT TO BE
Encourages the pupil to express his career hope

VI. ROLE PLAYING INTERVIEW
Helps the pupil to discover his level of aspiration and his doubts about himself and the future

VII. INTER-RELATEDNESS OF WORK
Helps the pupil to understand that there are many ways to regard the value and worth of an occupation

VIII. JOBS IN SPECIAL SETTINGS
Helps the pupil to delve more deeply into information about jobs in which he may be interested.

IX. JOBS AND EDUCATION
Encourages the pupil to delve more deeply into information about jobs in which he may be interested

X. WHAT IS SUBJECT SELECTION?
Prepare the pupil for the process of subject selection

XI. ABOUT ME
Encourage the pupil to express his ideal self

XII. SUCESS IN YOUR WORK
Presents;through the use of slides, a variety of jobs in the "World of Work"

XIII. EXPLORING THE WORLD OF WORK
Helps the pupil to explore the variety of jobs in the "World of Work" and relate jobs to self

XIV. EVALUATION
Helps the pupil to evaluate what he has learned

ROOM TO GROW is a career guidance program for children ages nine to twelve. The children in this age group, commonly referred to as "later childhood"; are in a period of comparative serenity. They are eager to learn; their interests are expanding into other parts of the world; they want to learn about things that are "real and true"; above all, this is a period in which the child delights in discovery. This period of unselfconsciousness lends itself to a beginning stage in career development.

Interest in career development begins early in life. The experiences of childhood set the stage for later vocational decision making. Vocational choice is not a single choice, "an event in time", but a series of choices which are made as the individual passes through various stages of his development. Vocational development is seen by Super[1] as an implementation of a self-concept, by Havighurst[2] as achieving an ego involving job and by Roe[3] as related to personility differences which are rooted to a considerable extent in childhood experiences. A persons career pattern has many determinants- his family, socio-economic level, mental ability, sex role, personality characteristics, and the opportunities to which he is exposed.

This view of career development gives direction to ROOM TO GROW. Experiences are provided which give more attention to the elementary school child's perception of himself and the image of the person he would like to become. Also, much attention is given to the various conditions which operate either to expand or to restrict the child's career pattern and his range of choices. These conditions are:

1. Family Attitudes and Values

   Children, as Super[1] has written, begin to acquire attitudes and values early in life, first from there parents and then from their peers in the neighborhood and school. Since vocational preferences are attitudes toward work and toward occupations, it follows that children who identify with their parents and their subculture, early begin to develop preferences for the types of occupations which their parents value.

---

[1]Super, Donald, The Psychology of Careers, New York: Harper and Brothers, 1957

[2]Havighurst, Robert J. "Youth in Exploration and Man Emergent," in Man In A World Of Work, edited by Henry Borow, Boston: Houghton Mifflin Co., 1964

[3]Roe, Anne, The Psychology of Occupations, New York: John Wiley and Sons., 1956

2. Socio-Economic Conditions

The child's percept on of work may be complicated by the work roles he sees around him. The middle-class child may come to feel that he has to succeed at a white-collar job to satisfy his parents' ambitions. On the other hand, children from low income levels may have no suitable occupational role models in the family, and few family activities related to their aspirations. If they aspire to occupations which are above those of their parents, they are dependent upon exceptional relatives, upon the school, and upon such sources as fiction, movies, and television for information as to what it is like to get a higher education or to work as a city planner.

3. Educational Expectations

The relation of education to the level of motivation in the society is very direct. John Gardner[1] has said that the goals the young person sets for himself are very heavily affected by the framework expectations o: his society. If much is expected of him, the chances are that he will expect much of himself. The school can create a climate where the child can dare to aspire to achieve his ideal self.

4. Development o. Self-Concept

As a child grows he learns what he can and cannot do in large part by his contract with the significant people in his life. He also begins to develop his concept of self through his experiences and identification with various adults. As he grows older, the child looks to those outside his family for models of what he can do and should do to cope with the world.

No one expects children to make decisions about vocations before such choices should or must be made. But this does not mean that the early fantasy choices made in childhood do not have value. Although early choices are usually in a fantasy stage, the teacher's response to the child's announced career hope is likely to affect the child's self view.

Teachers and parents can be particularly helpful in assisting and encouraging children in career exploration. Girst, they can help by supporting and encouraging a child's fantasy choices. An example o: this is Carmella, a fifth grade child, who definetly said to her mother, "I want to ask you a question and I hope you won't be angry." Carmella's mother assured her

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[1]Gardner, John S., SELF RENEWAL, New York: Harper and Row, 1963

that she could ash her any question. Then Carmella looked up, still fearful, and asked, "Would you be angry if I became an archeologist?" The mOther's reply was, Carmella see herself as a successful person.

General Program Description

The program recommends a series of twenty-six to thirty guidance projects within the school year. Of the total number of projects, nine or ten suggested as teacher-led group activities. Fifteen or more can be used for guest speakers representing particular occupational categories and several may be trips for the purpose of seeing people at work or students in higher level schools or colleges preparing for careers.

The guidance sessions may last from thirty minutes to an hour and a quarter depending upon attention span, interest, and needs of a particular group of children.

Guidance Sessions with Teacher

A. General Objectivies

1. Awaken in the child a sense of excitement and hope about himself and his possiblilities as an adult.
2. Use the child;s innate curiosity and delight in discovery to help him develop a healthy self-concept.
3. Provide experiences through a variety of activities that enable the child to expand his vocational and occupational preferences
4. Develop a desirable approach to the process of career choice.

B. Content of Guidance Sessions with Teacher

The first five sessions are used by the teacher to define the program, establish its purpose, and encourage the child to express his career hopes. Other sessions with the teacher are interspersed throughout the series.

These sessions should be regarded more as projects. The time allotted for any one project may cover two to four meetings with the children. Consideration should be given to integrating each project with other learning activities in your classroom.

Career Extension Center
Activities for Grade 6

Careers Dependent on Nature

A. Purpose: The learner will discover that a raw material from nature is responsible for a large chain of occupations. He will also become more concerned with ecology, and the dependence we all have on our natural resources.

B. Materials: No special material needed.

C. Activity: Let each student select a natural resource, such as coal, oil, tree, limestone, copper, salt, granit, etc.. Through research, he can find a large variety of finished products made from the resource, and the various occupations that are dependent upon it.

D. Variations: The student could list the finished products and the occupations that would be eliminated if a particular resource were no longer available.

CAREER QUIZ GAME

A. Purpose: To expand the learners knowledge of the hundreds of careers involved with common resources.

B. Materials: Paper and pencil, or oral

C. Activity: The teacher will tell the class a word representing a natural resource. The students will either write or give orally a list of occupations involved with that resource.

EXAMPLE: Teacher, "tree"
Student, "logger, tree farmer, nursery man, log truck driver, scaler, orchard farmer, fruit picker, etc."
Teacher,"wheat"
Student, "seed store man, farmer, miller, baker, wallpaper hanger, spaghetti maker, etc."

Tools of the Trade

A. Purpose: To arouse an interest in careers through the tools associated with many occupations.

B. Materials: A variety of pictures of tools, implements, equipment, associated with various trades and occupations.

C. Activity: Allow the learners to identify an occupation by viewing those things we identify as belonging to the occupation.

Carpenter	Mason	Butcher
saw	trowel	apron
hammer	level	cleaver
square	mason's hammer	knife

Career Extension Center
Activities for Grade 6

Class Newspaper

A. Purpose: The learners can become familiar with many of the careers involved in the production of a newspaper.

B. Materials: This will vary with the resources available. A typewriter, and a means of reproducing copies are almost essential.

C. Activities: Gathering new, writing, illustrating, advertising, layout, editing, printing, and distribution are all necessary jobs to be done. This activity can be a one issue newspaper or a continuous class activity.

Vocabulary - Kinds of Houses

A. Purpose: This activity is designed to extend the concept of "house" and to help build vocabulary used in the construction business.

B. Materials: If available pictures from home building plan books, magazines, or newspapers o the different types of houses.

C. Activity: Tell the children you are going to take them on a imaginary house tour. Explain that there are many different types of houses. Say: "There is a split-level house. What kind of house would a split-level house be?" (discuss)

Continue with:

ranch style house	duplex
two-story house	bunk house
apartment house	Penthouse
town house	split-entry house
hotel	bungalow
motel	triplex

ALL Jobs are Important

A. Purpose: Children must learn to understand that work of all people is important.

B. Activity:
1. List in order of importance (as you see it) the following jobs: stenographer, postal clerk, truck driver, refuse collector, bus driver, typist, credit manager, electrician, plumber, heavy equipment operator. What measure did you use to try to rank them?
2. Organize a debate about the merits of (assume equal qualifications) bus driver vs. truck driver.

Career Extension Center
Activities for Grade 6

What's My Line?

A. Purpose: To become acquainted with a variaty of occupations through the participation in this popular quiz game.

B. Materials: None essential

C. Activity: Twenty questions requiring yes or no answers are allowed the group to discover the occupation assumed by the "Unknown worker". Whoever guesses the occupation is the next "unknown worker".

Comparing Container Values

A. Purpose: The learner will become aware of capacity differences in various commercial containers and compute prices per unit.

B. Materials: Tin cans, boxes, baskets, jars, etc., of various sizes and shapes.

C. Activities: Learners will compute prices per unit in a variety of containers which are priced by the teacher to find the best value.

Careers From Start to Finish

A. Purpose: The learner will discover the occupations involved in the many steps a raw material goes through before it is ready to sell to the consumer.

B. Materials: A newspaper and a box of ready to eat ceral.

C. Activity: The students will find the current price of the grain used in the ceral. This is found in the "commodities" section in the newspaper, and priced by the ton. From this price a computation is made of the initial cost of the grain in the cereal box. The students will now do some research to discover why there is such an increase between the original cost and the final selling price. The student will discover many occupations involved in this process.

D. Variation: A similar exercise can be done with any number of raw materials and finished products, such as the cost of steel and a pair of pliers, or the cost of clay and a set of china.

"CAREERS EXPOSURE" GUIDELINES FOR COUNSELORS

General

To make in-school activities more relevant to students who might otherwise drop out and to help students who have had few opportunities to experience the real work world, a course has been developed termed "Careers Exposure". This will allow selected students to utilize community resources in exploring careers that correlate with their particular interests and aptitudes.

Credit and Length of Time

Basically, a student enrolled in Careers Exposure will spend two to three hours in structured activities in a business or agency within the community. Students will receive elective high school credit for this on the basis of one-half (½) credit per 100 hours on the exposure station. A maximum of three credits can be earned in Careers Exposure in the high school educational program. Since the major objective o this activity is to provide intensive exposure to a variety of careers, the length of time at any one stat on need not be extensive. The time at any single exposure station will vary according to circumstances but will not exceed 300 hours. Upon reaching that limit the student will be placed in another exposure station, fed back into the regular curriculum or the existing station will be converted to training position subject to a new contract.

Grades, Participation/Contract

Students in grades 9-12 will be eligible for Careers Exposure. The selection or determination of students most applicable for these activities will be the responsibility of the counselors. Counselors, through their contact with the students, will also be instrumental in determining the particular career exposure most benificial in each case. The actual placement in business or agency and the periodic follow up necessary will be the duty of the Career Consultant assigned to that school. The consultant wil also be responsible for th necessary paperwork and arrangement of the contractual agreement between school, student and employer. The contract will contain general stipulations common to all students taking careers exposure as well as a list of the behavioral objectives specifically applicalbe to each placement. These objectives will be tailored according to student needs and the facets available in the exposure station.

School Day

For credit to be awarded for Career Exposure the time spent on the job must be during the normal school day. The exact times being dependent upon the students academic schedule. A maximum of three hours per day can be allotted for these activities with a minimum time allowed of two hours per day. The Career Consultant will be responsible for grad ng of this activity based upon employer reports and counselor input.

"Careers Exposure" (continued)

Wage

Monetary compensation is not a consideration in this contact. Experience gained and credit awarded is considered sufficient reinforcement as long as the student - employer relationship is one of exposure and not production.

Number of Students

The maximum number of students to participate in this program will be thirty from each of the schools containing high school students unless otherwise mandated by the administration of those schools.

Transportation

Transportation other than that provided by normal school bussing will be the responsibility of the students and their parents. A student will have to show proof of adequate transportation to and from school exposure station and home before a placement is made.

Parents

The parents of each student participation in Careers Exposure must be advised of the program and its' objectives, and must be in total agreement with the plan for their child. It will be the responsibility of the Career Consultant and the counselor to bring about total awareness on the part of the parents and to insure their input into the program.

"CAREERS EXPOSURE" GUIDELINES FOR EMPLOYERS

To make in-school activities more relevant to students who might otherwise dropout and to help students who have had few opportunities to experience the real work world, a course has been developed termed "Careers Exposure". This will allow selected students to utilize community resources in exploring careers that correlate with their particular interests and aptitudes.

The Careers Exposure plan of placing students in a working relationship with individuals or organizations is based on the premise that so exposing them will ultimately aid them to choose a life work. It is neither proposed nor held that so exposing them will give them training which is more than basic. Rather, it is advanced that such exposure to any line of work. It is further proposed that an exposure station will in no way alter the number of employees a firm or agency may have.

Basically, a student enrolled in Careers Exposure will spend two to three hours in structured activities in a business or agency within the community. Students will receive elective high school credit for this on the basis of one-half (1/2) credit per 100 hours on the exposure station. A maximum of three credits can be earned in this manner in any one school year and a maximum of six credits may be earned in Careers Exposure in the high school educational program. Since the major objective of this activity is to provide intensive exposure to a variety of careers, the length of time at any one station need not be extensive. The time at any single exposure station will vary according to circumstances but will not exceed 300 hours. Upon reaching that limit the student will be placed in another exposure station, fed back into the regular curriculum or the existing station will be converted to a training position subject to a new contract.

A contract will be drawn up between student, school and employer for the purpose of integrating the career experience with the school process and to allow the awarding of credit. The prime responsibility of the employer or career exposure supervisor is to provide a work orientation experience of as broad a magnitude as possible. An example would be a young lady requesting exposure to medical careers. A clinic administrator may arrange for the girl to spend two weeks in each of ten different medical settings within the clinic. The goal being to allow the girl to develop a realistic picture of the various jobs involved within the medical profession.

Since, under this type of arrangement, a student will seldom be a productive part of a business, monetary compensation is at the option of the employer. Some employers do, however, pay students a training wage for orientation type experiences.

It is with the cooperation of local businesses and agencies that the educational curriculum can be supplemented and can indeed be made meaningful to high school students. As businessmen have known for a long time and as educators have come to find, education does not all come from the classroom but is, in fact, very dependent upon community resources.

APPENDIX D

CAREER EDUCATION RESOURCES

CAREER EXTENSION CENTER

SOUND FILMSTRIPS

WHY WORK AT ALL, Guidance Associates
AN OVERVIEW OF TECHNICAL EDUCATION, Guidance Associates
CAREERS IN MATERIALS ENGINEERING: THE AEROSPACE AGE
YOUR FUTURE IN ELEMENTARY EDUCATION
JOB OPPORTUNITIES, Group I
CAREERS IN NATURAL RESOURCES, Vocational Educational Productions
CAREERS IN ANIMAL INDUSTRY, Vocational Education Productions
CAREERS IN CROPS, Vocational Education Productions
AVIATION: WHERE CAREER OPPORTUNITIES ARE BRIGHT, U.S. Office of Education, National Aerospace Education Council
TROUBLE AT WORK, Guidance Associates
LIKING YOUR JOB AND YOUR LIFE, Guidance Associates
A NEW LOOK AT HOME ECONOMICS CAREERS, Guidance Associates
PREPARING FOR THE WORK OF WORK, Guidance Associates

CASSETTE

ADVERTISING, Classroom World Productions
AIR CONDITIONING AND REFRIG., Classroom World Productions
ARCHITECTURE, Classroom World Productions
BEAUTY CULTURE, Classroom World Productions
BROADCASTING, Classroom World Productions
COMPUTER, Classroom World Productions
ENGINEERING, Classroom World Productions
FOOD PRODUCTION, Classroom World Productions
LAW, Classroom World Productions
OCEANOGRAPHY, Classroom World Productions
PHOTOGRAPHY, Classroom World Productions
PRINTING AND ENGRAVING, Classroom World Productions
RESTAURANT BUSINESS, Classroom World Productions
SELLING, Classroom World Productions
TRANSPORTATION, Classroom World Productions

FILMSTRIPS

BFA "BOOKKEEPING: OCCUPATIONS AND OPPORTUNITIES"
"CLERICAL OCCUPATIONS AND RESPONSIBILITY"
Transparencies for Overhead Projections
"FATHERS WORK"
"MOTHERS WORK, TOO"

POSTERS

"TRIGONOMETRY IN OCCUPATIONS", David E. Newton; J. Weston Walch, Publisher, 1969
"COMPUTERS IN OCCUPATIONS", David E. Newton; J. Weston Walch, Publisher, 1969

"PROFESSIONAL OCCUPATIONS", James P. McGouge; J. Weston Walch, Publisher, 1968
"CAREERS IN MUSIC", Gene Stanford; J. Weston Walch, Publisher, 1968
"OPPORTUNITIES IN RETAILING", Louis D. Mason; J. Weston Walch, Publisher, 1968
"CAREERS IN ART", William Reid; J. Weston Walch, Publisher, 1970
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"ARITHMETIC IN OCCUPATION", David E. Newton; J. Weston Walch, Publisher, 1968
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"GEOMETRY IN OCCUPATIONS", William P. Fessenden; J. Weston Walch, Publisher, 1968
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Vol. II: Careers and Occupations
Doubleday and Co., Inc.
DICTIONARY OF OCCUPATIONAL TITLES: 1965
Vol. I: Definition of Titles Third Edition
Department of Labor
EMPLOYMENT OUTLOOK
Reprints from the Occupational Outlook Handbook 1970-71 Ed.
U.S. Department of Labor
OCCUPATION GUIDANCE: PLANNING YOUR FUTURE
Vol. II, Finney Company 1966
OCCUPATIONAL GUIDANCE: PLANNING YOUR FUTURE
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O E K 1970-72 Edition, OCCUPATIONAL EXPLORATION KIT, S.R.A.

FINDING YOUR ORBIT, Designed to help students analyze interest,
abilities make realistic career choices
Haldeman-Hoffman-Moore-Thomas
Chronicle Guidance Publications, Inc.
OCCUPATIONAL BRIEFS - ARTISTIC AND MUSICAL
Chronicle Guidance Publications, Inc.
OCCUPATIONAL BRIEFS - HEALTH
Chronicle Guidance Publications, Inc.
OCCUPATIONAL BRIEFS - OUTDOORS
Chronicle Guidance Publications, Inc.
Life Career Game Guidance Department Palo Alto School District
Horizons Unlimited American Medical Association 1970
Career Information: A Directory of Free Materials for Counselors
and Teachers A.L. Block Sextant Systems, Inc.
Focus on Self - Development Kit
Stage One: AWARENESS
SRA 1970 HERE I AM Activity Books and Guides
WHAT COULD I BE? Grades 3-6 Teacher's Manuel SRA
A BOOK ABOUT ME Grades K-1 Teacher's Manuel SRA
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Widening Occupational Roles Kits SRA 1967
PAC People and Choices
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OUR FIRE DEPARTMENT
POLICEMEN AND FIREMAN
SCHOOLS
OUR SCHOOL
OUR POST OFFICE
MAKING WORK EASIER
MAN BECOMES AN ASTRONOMER
MEN WHO BUILD HOUSES
WORKING IN OUR TOWN
OUR HEALTH DEPARTMENT
OUR POLICE DEPARTMENT
OUR JOB IN SCHOOL
PART OF THE TEAM
THE DOCTOR
AIRPORTS AND AIRPLANES
WE BUILT NEW HOUSES
OUR PARKS AND PLAYGROUNDS
ALASKA: OTHER INDUSTRIES, TRANSPORTATION, EDUCATION AND GOVERNMENT
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AIRPORTS AND AIRPLANES
OUR POST OFFICE
SCHOOLS
POLICEMEN AND FIREMEN
MY FATHER IS A POLICEMAN

CAREER EDUCATION RESOURCES
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HUNTER ELEMENTARY SCHOOL

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GAS STATION ATTENDANT, THE (33 Frames - color)
JOB INTERVIEW, THE (31 frames - color)
NURSES AID, THE (33 frames - color)
SCHOOL CAFETERIA WORKER, THE (36 frames - color)
STOCKER IN A SUPERMARKET (33 frames - color)
THE VARIETY STORE (34 frames - color)
THE WAITRESS (34 frames - color)
OUR JOB IN SCHOOL (48 frames - color)
SCHOOL HELPERS (48 frames - color)
LET'S VISIT THE DENTIST (41 frames - color)
ALASKA - COMMERCE AND INDUSTRY (46 frames - color)

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K-6

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AIRPORTS AND AIRPLANES (30 frames - color)
OUR POST OFFICE (30 frames - color)
SCHOOLS (30 frames - color)
POLICEMEN AND FIREMEN (30 frames - color)
JANET VISITS A DAIRY FARM (31 frames - color)
OUR SCHOOL HELPERS (37 frames - color)
SCHOOL HELPERS (48 frames - color)
ASSEMBLY LINES AND MERCHANDISING (50 frames - color)
MACHINES REPLACE PEOPLE (24 frames - color)
MILKING (47 frames - color)

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DENALI ELEMENTARY SCHOOL

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HELPING MOTHER (46 frames - color)
STICKING TO YOUR JOB (47 frames - color)
TRY, TRY AGAIN - PERSERVERANCE (33 frames - color)
WORKING TOGETHER IN A NEIGHBORHOOD (27 frames - color)
MY FATHER IS A BUS DRIVER (49 frames - color)
MY FATHER IS A FIREMAN (57 frames - color)
MY FATHER IS A GARBAGE MAN (50 frames - black & white)
MY FATHER IS A POLICEMAN (53 frames - color)
MY FATHER IS A JUDGE (53 frames - color)
MY FATHER IS A PUBLIC HEALTH DOCTOR (50 frames - black & white)
MY MOTHER IS A TEACHER (53 frames - color)
OUR FIRE DEPARTMENT (48 frames - color)
OUR HEALTH DEPARTMENT (48 frames - color)
OUR POLICE DEPARTMENT (48 frames - color)

AMERICAN FARMER, THE (25 frames - color)
DAIRY FARMING (26 frames - color)
FRUIT FARMING (26 frames - color)
TRUCK FARMING (2y frames - color)

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BARNETTE ELEMENTARY SCHOOL

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TO A CITY (40 frames - color)
TO A FARM (40 frames - color)
TO A RANCH (40 frames - color)
TO A ZOO (39 frames - color)
TO AN AIRPORT (38 frames - color)
THE BAKER (43 frames - color)
THE BANKER (37 frames - color)
THE BUTCHER (40 frames - color)
THE DAIRYMAN (46 frames - color)
THE FRUIT AND VEGETABLE STORE (34 frames - color)
OUR NEIGHBORHOOD LAUNDRY (35 frames - color)
THE SHOEMAKER (50 frames - color)
THE WATCHMAKER AND JEWELER (36 frames - color)
OUR HEALTH DEPARTMENT (48 frames - color)
SCHOOL HELPERS (48 frames - color)
COMMUNITY HELPERS FOR HEALTH (22 frames -color)
HAYING (47 frames - color)

NORTH POLE ELEMENTARY SCHOOL

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CAREER EDUCATION RESOURCES
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RESOURCE MATERIALS AVAILABLE IN ALL ELEMENTARY SCHOOLS

POSTERS

COMMUNITY HELPERS POSTERS, S.A. Owen Publishing Co.
MODERN WORKERS, SET I, S.A. Owen Publishing Co.
MODERN WORKERS, SET II, S.A. Owen Publishing Co.

SOUND FILMSTRIPS

AN OVERVIEW OF TECHNICAL EDUCATIONS
AS THEY GROW/ELEMENTARY GUIDANCE - NEW DIMENSIONS IN MEETING PUPIL NEEDS
SHOULD YOU GO TO COLLEGE
OCCUPATIONAL EDUCATION
JOBS FOR HIGH SCHOOL STUDENTS
HUNG UP ON HOMEWORK?
DROPPING OUT: ROAD TO NOWHERE
BABYSITTING: THE JOB -- THE KIDS
DEVELOPING YOUR STUDY SKILLS

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1. The World of Minerals 2. The Minerals Engineer AIME CAREER FILMSTRIP
SCHOOL SKILLS FOR TODAY AND TOMORROW (6 filmstrips)

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6. Social Service Occupations, Clergy, Social Worker, Teaching.

TAPE RECORDING

ADVERTISING (account executive)
APPLIANCE SERVICE MAN
ASSEMBLER (factory)
BIOLOGIST
CHEMIST
COMMERCIAL PHOTOGRAPHER
COSMETOLOGIST (beauty operator)
COUNSELOR (guidance)
DRAFTSMAN
ELECTRICIAN
PROGRAMMER
INSURANCE AGENT AND BROKER
LAWYER
LIBRARIAN
MEDICAL THECNICIAN
MACHINIST
MEDICAL X-ray TECHNICIAN
MUSICIAN
NURSE, LICENSED - PRACTICAL
NURSE REGISTERED
PHYSICIAN
PILOT AND COPILOT

PLUMBER AND PIPEFITTER
POLICEMAN
PRINTING PRESSMAN
PUBLIC RELATIONS MAN
REALESTATE BROKER
COMMERCIAL ARTIST
RETAIL SALESWOMAN
SOCIAL WORKER
STEWARDESS
SWITCHBOARD OPERATOR (telephone)
TECHNICAL WRITER
TELEVISION AND RADIO SERVICE TECHNICIAN
DENTAL TECHNICIAN
SECRETARY
LOCAL TRUCK DRIVER
HEAVY MACHINE OPERATOR
GROCERY STORE CLERK
SECONDARY SCHOOL TEACHER
ARCHITECT
ACCOUNTANT
DENTAL HYGENIST
CARPENTER
ELECTRONIC TECHNICIAN
ELEMENTARY TEACHER
AUTO MECHANIC
LAUNDRY ROUTE SALESMAN
STATIONARY ENGINEER
TOOL AND DIE WORKER

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INTERVIEWS ON CASSETTES

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"AN OVERVIEW OF TECHNICAL EDUCATION"
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LIKING YOUR JOB AND YOUR LIFE
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TROUBLE AT WORK
WHY WORK AT ALL?

APPENDIX E

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STUDY OF EMPLOYMENT OF WOMEN IN THE FEDERAL GOVERNMENT, 1970.

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ABSTRACT - THIS STUDY PRESENTS STATISTICAL DATA GATHERED IN A SURVEY OF FEMALES EMPLOYED IN FULL-TIME FEDERAL CIVILIAN WHITE-COLLAR JOBS IN THE U.S., TERRITORIES OF THE U.S., AND FOREIGN COUNTRIES. THE DATA ARE PRESENTED IN SEVERAL TABLES REFLECTING EMPLOYMENT BY: (1) GENERAL SCHEDULE AND EQUIVALENT GRADES, (2) SPECIAL OCCUPATIONAL CATEGORIES, (3) OCCUPATIONAL GROUP, AND (4) SELECTED AGENCIES. SINCE THE LAST SURVEY, THE TOTAL NUMBER OF FULL-TIME WHITE-COLLAR WOMEN SHOWED A NET DECREASE OF 7,067. THEY NOW REPRESENT 33.2 PERCENT OF THE TOTAL WHITE-COLLAR WORKFORCE (1,981,722) AS COMPARED TO 33.4 PERCENT IN OCTOBER 1969. ALL OF THE NET DECREASE MAY BE ATTRIBUTED TO LOSSES IN GRADES 1 THROUGH 6 AND THE EQUIVALENT, WHILE WOMEN IN GRADES 13 AND ABOVE INCREASED 6.6 PERCENT. THE GENERAL ADMINISTRATIVE, CLERICAL, AND OFFICE SERVICE GROUP CONTINUES TO BE PREDOMINATED BY WOMEN, ALTHOUGH THE NUMBER OF WOMEN IN THE GROUP DROPPED SLIGHTLY. AVERAGE SALARIES FOR WOMEN ($7,727) WERE SIGNIFICANTLY LOWER THAN FOR MEN ($10,981). THE HIGHEST SALARIES PAID TO WOMEN WERE IN THE VETERINARY MEDICINE SCIENCES ($14,866) AND COPYRIGHT, PATENT, AND TRADEMARK ($14,573). (SB)

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STUDY OF EMPLOYMENT OF WOMEN in the FEDERAL GOVERNMENT 1970

PREPARED FOR

THE FEDERAL WOMEN'S PROGRAM

U.S. Civil Service Commission
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HIGHLIGHTS

- The total number of full-time white-collar women showed a net decrease of 7,067 since the last survey. They now represent 33.2 percent of the total white-collar workforce (1,981,722) as compared to 33.4 percent in October 1969. During the same period, the number of men remained virtually unchanged (down 103 to 1,324,395).

- All of the net decrease in the number of women may be attributed to the losses in grades 1 thru 6 and the equivalent. At the other end of the continuum, women in grades 13 and above increased by 470 (6.6 percent) to 7,539. This compares with an increase of 3.6 percent in the number of men in these grades.

- Slightly more than 55 percent (1,093,337) of all white-collar employment were in positions in grades 1 thru 6. Thirty-five percent (690,500) of the white-collar workforce were reported in the intermediate grades (7 thru 12) and the remaining 10 percent in the upper level grades (13 and above). Women comprised 46.1, 20.7, and 1.7 percent, respectively, of the previously mentioned grade groupings.

- For the most part, the median grade structure of the white-collar workforce remained the same as last year. The median grade was higher for women than for men in only two occupational groups: Medical with 7 for women and 6 for men; and Miscellaneous with 6 for women and 5 for men. These are the same two occupational groups in which the median grade for women in 1969 was higher than for men. The median grade in the Library and Archives group showed a significant shift upward for men. This year, the median grade for men was 9 and 7 for women as compared to a median of 7 for both men and women in the 1969 survey.

- The General Administrative, Clerical, and Office Services Group continues to be predominated by women. However, the percentage of women in the group dropped slightly to 68.9 percent or 309,533 out of the total 449,057 since last year. Also a small decrease was reported in the number of women in the lower grades in this group. Last year, slightly more than 87 percent of all women were in grades 1 through 6, while this year, the number dropped to 86 percent.

- Average salaries for women were significantly lower than for men -- $7,727 compared with $10,981. The highest salaries paid to women were in the Veterinary Medical Sciences ($14,866) and Copyright, Patent, and Trademark ($14,573).

STUDY OF EMPLOYMENT OF WOMEN IN THE FEDERAL GOVERNMENT

1970

INTRODUCTION

This study presents statistical information on full-time Federal civilian white-collar employment. 1970 data are compared with that collected in 1969. Both surveys, conducted by the Civil Service Commission, provided for submission by the Federal agencies of comprehensive reports showing full-time employment by agency, grade or salary equivalency, and occupational series as of October 31.

COVERAGE

The data presented in this study are representative of full-time white-collar Government employment (General Schedule Classification and other non-wage systems) worldwide. Excluded are employees of the Board of Governors of the Federal Reserve System, members and employees of the Congress, employees of the Central Intelligence Agency and the National Security Agency, and foreign nationals employed overseas. In 1970, as in 1969, data were collected for four major geographic areas only. They are: (1) the Washington, D. C., metropolitan area[1/]; (2) United States (i.e., the 50 States) excluding the Washington, D. C., metropolitan area; (3) Territories of the United States; and (4) Foreign Countries.

PRESENTATION AND UTILIZATION OF DATA

Throughout this publication, occupational groups and occupations within groups are those provided for in the Handbook of Occupational Groups and Series of Classes, published by the Civil Service Commission. The exception to this coverage is the Postal Operations Group, encompassed within the single agency Postal Field Service system, which is provided for in the Personnel Handbook, Series P-1, published by the Post Office Department.

The grade distribution data shown in Tables B, C, and D, represent "grades or levels" of the various pay systems considered equivalent to specific General Schedule grades. For those positions not under the General Schedule (GS) pay system, grade equivalency was derived by comparing the GS salary rates with the corresponding salary rates in other pay systems.

1/ The Washington, D. C., metropolitan area includes: the District of Columbia; Montgomery and Prince Georges counties, Maryland; the cities of Alexandria, Fairfax, Falls Church, and the counties of Arlington, Fairfax, Loudoun, and Prince William, Virginia. Loudoun and Prince William counties were included as of July 1967.

Data for employees whose annual salary rates are above the General Schedule (e.g., Executive Pay Act, and some Public Law type positions) are identified in the tables as "ABOVE 18". Employees for whom no grade or salary was reported are identified as "UNGRADED". For the most part these are in the Judicial Branch, representing support staff to the Federal judges and courts throughout the United States. All "grades or levels" are listed even though there may be no employment in some instances. Annual salary rates paid under the General Schedule for 1970 and 1969 are shown in the salary table at the end of this publication.

Utilizing the previously described grade equivalencies, occupations within the various pay systems have been classified according to three major categories. These categories, presented in Tables E and F, are based on the level of work performed and are defined as follows:

Category III - Positions in occupations (primarily professional, technical, or administrative at "grade or level" 5 and above) requiring at the entry level:

(a) baccalaureate or higher education; or

(b) equivalent professional, technical, or administrative experience.

Category II - Positions requiring specialized education or experience:

(a) technician positions primarily at "grade or level" 4 and above requiring either specialized experience or specialized education above the high school level; or

(b) clerical, aid, or support positions above the entry levels requiring specialized experience or education.

Category I - Positions requiring minimal specialized education, experience, or skill:

(a) primarily entry level clerical, aid, and support positions "grade or level" 3 and below; or

(b) entry level Postal Field Service positions "grade or level" 5 and below.

Being of a widely varied nature, positions in the general series (GS-301, 501, 1001, 1701, 2001, and 2101) are assigned to the above categories on the following basis:

"grade or level" 9 and above - Category III
"grade or level" 4 through 8 - Category II
"grade or level" 3 and below - Category I

The percent of women in both columns, "Employment 31 October 1970" and "Employment 31 October 1969," represent the percentage of women with respect to total employment for each of those years (i.e., the number of women divided by the total employment for that year). With the exception of Table F, where zeros are shown, both the "Number" and "%" columns will be blank if there were no women reported.

The "Percent Change" columns reflect increases or decreases in employment for "TOTAL" and "WOMEN" from 1969 to 1970. In both cases, the base for comparisons with 1970 is the 1969 data. The percent change is computed by taking the difference between employment in 1969 and that shown in the corresponding column for 1970 and dividing by the 1969 figures. If the employment in 1970 is larger than that shown for 1969, the result will be positive and represent the percent of increase. On the other hand, if the employment in 1970 is less than that shown in the corresponding column in 1969 the result will be negative and represent the percent of decrease. A minus sign will precede the percentage when a decrease is represented. An asterisk (*) is used in either or both columns, as appropriate, when, for a particular grade or occupation there is no employment in 1969, or the number is so minute in comparison to that reported in 1970 so that the "Percent Change" is difficult to interpret. All percentages have been rounded to the nearest tenth of a percent.

Tables C and H present a comparison of employment by grade and occupational group in 1969 with that reported in 1970 within agencies. A number of executive branch agencies, each having an especially small total employment, were consolidated and are titled "OTHER AGENCIES" for use in these two tables. For the most part, these are agencies that were terminated prior to October 31, 1970, or newly established since October 31, 1969, or had a total employment in 1969 of 25 or less. These agencies, each with their total employment and the number of women, for both 1969 and 1970 are identified in Table I at the end of this publication.

A total of 1,981,722 full-time employees were reported by over 100 agencies in over 450 white-collar occupations as of October 31, 1970, of which 657,327 or 33.2 percent were women. This compares with a total of 1,989,792 employees reported as of October 31, 1969, of which 665,294 or 33.6 percent were women, thus reflecting a net decrease of 8,069 in total full-time white-collar employment (women decreased 7,967 or 7.79 percent).

The white-collar employment presented in detail in the tables that follow represents approximately 76 percent of the total full-time Federal workforce and nearly 93 percent of all full-time women employees. The following figures show the total Federal workforce, full-time and part-time:

	1970			1969		
	Total	Men	Women	Total	Men	Women
Full-time Employment	2,556,650	1,854,068	702,582	2,610,128	1,892,579	717,549
White-Collar	1,981,722	1,324,395	657,327	1,989,792	1,324,498	665,294
Blue-Collar	574,928	529,673	45,255	620,336	568,081	52,255
Total Full-Time and Part-Time	2,766,992*			2,818,618		

*Excludes foreign nationals

INDEX

FULL-TIME WHITE-COLLAR EMPLOYMENT

BY

AGENCY AND GEOGRAPHIC AREA

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE A

BY AGENCY AND GEOGRAPHIC AREA

OCTOBER 31, 1970

AGENCY	D.C. MET AREA			50 STATES a/			TERRITORIES			FOREIGN COUNTRIES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
ADMIN CONFERENCE OF THE U.S	5	3	2									
AMER BATTLE MONUMENTS COMM	6	1	5							37	37	
ADVIS COMM ON INTERGVT REL	30	19	11									
ARMS CONTROL & DISARM AGENC	161	76	85									
ATOMIC ENERGY COMMISSION	2,394	1,450	944	4,520	3,250	1,270	8	5	3	17	12	5
AIR FORCE	6,820	3,107	3,713	141,791	82,540	59,251	1,014	551	463	5,852	2,287	3,565
AGRICULTURE	11,452	6,268	5,184	72,365	57,027	15,338	427	329	98	309	273	36
NAT FOUNDTN ON ARTS & HUMAN	103	30	73	1		1						
PRESIDENT'S ADVISORY COUNCI	20	12	8									
APPALACHIAN REGIONAL COMM	10	6	4									
ARMY	26,391	14,334	12,057	204,585	120,347	84,238	1,133	707	426	14,137	8,353	5,784
COASTAL PLAINS REGIONAL COM	6	3	3	1	1							
BUREAU OF THE BUDGET	564	351	213									
CIVIL AERONAUTICS BOARD	634	379	255	26	24	2						
COMMISSION ON CIVIL RIGHTS	134	57	77	20	11	9						
COUNCIL OF ECONOMIC ADVISER	50	24	26									
COMMISSION OF FINE ARTS	4	2	2									
COMM ON REF FED CRIMINAL LA	6	2	4									
COMMERCE	15,836	9,602	6,234	14,234	8,621	5,613	89	84	5	149	144	5
CIVIL AERONAUTICS BOARD	1	1										
CIVIL SERVICE COMMISSION	2,162	955	1,207	3,052	1,338	1,714	11	5	6			
NAT CREDIT UNION ADMIN.	66	37	29	353	304	49	1	1				
CANAL ZONE GOVERNMENT							1,532	747	785			
DOMESTIC COUNCIL	24	15	9									
DEFENSE SUPPLY AGENCY	2,142	1,300	842	38,720	22,822	15,898	10	8	2	17	14	3
JUSTICE	12,353	5,936	6,417	25,090	18,490	6,591	239	164	75	193	138	55
LABOR	5,402	2,491	2,911	5,042	3,144	1,898	58	38	20	13	5	8
DELAWARE RIVER BASIN COMM	1		1	1	1							
EXPORT-IMPORT BANK	353	172	181							1	1	
EQUAL EMPLOY OPPORTUNITY CO	293	130	163	456	274	182						
COUNCIL ON ENVIR QUALITY	41	17	24									
EXECUTIVE MANSION AND GROUN	8	4	4									
FEDERAL COMMUNICATIONS COMM	1,089	615	474	396	283	113	6	5	1			
FED DEPOSIT INSURANCE CORP	575	317	258	1,783	1,463	320	6	6				
FEDERAL RADIATION COUNCIL	4	2	2									
FEDERAL HOME LOAN BANK BOAR	446	235	211	763	610	153						
FARM CREDIT ADMINISTRATION	99	56	43	114	77	37						
FED MEDIATN & CONCILATN SER	75	34	41	360	279	81						
FEDERAL POWER COMMISSION	905	611	294	144	108	36						
FOREIGN CLAIMS SETTLEMT COM	33	18	15									
FEDERAL TRADE COMMISSION	957	497	460	362	225	137						
FOUR CORNERS REGIONAL COMM	4	2	2	1	1							
COMM FINAN STRUCT & REG.	2	1	1	3	2	1						
COMM ON GOV PROCUREMENT	44	21	23									
COM ON POPULATION GROWTH	8	3	5									
UPPER GREAT LAKES REG COMM	1	1		1		1						
OFF OF INT GOV RELATIONS	4	4										
GENERAL SERVICES ADMIN	7,198	4,890	2,308	11,272	6,409	4,863	24	16	8	11	9	2
HEALTH EDUCATION & WELFARE	25,466	12,194	13,272	75,229	28,750	46,479	374	197	177	176	158	18
HOUSING AND URBAN DEVELOPME	4,274	1,903	2,371	10,410	6,739	3,671	202	137	65	1	1	
U. S. INFORMATION AGENCY	2,845	1,673	1,172	143	94	49				1,105	889	216
INTERSTATE COMMERCE COMM	1,261	730	531	440	285	155						
INDIAN CLAIMS COMMISSION	38	23	15									
INTERIOR	7,803	4,825	2,978	43,272	30,268	13,004	150	127	23	363	311	52
ATL-PAC INTEROCEAN CANAL CO	4	2	2									
COMM ON INTERNTL TRADE	11	6	5									
JUDICIAL BRANCH	907	508	399	5,760	3,456	2,304	61	37	24			
ARCHITECT OF THE CAPITOL	147	104	43									

BOTANIC GARDEN	5	5	2									
LIBRARY OF CONGRESS	3,520	1,650	1,870							13	10	3
GENERAL ACCOUNTING OFFICE	2,806	1,796	1,010	1,729	1,524	205				98	88	10
GOVERNMENT PRINTING OFFICE	1,423	612	811	72	28	44						
UNITED STATES TAX COURT	155	81	74									
FEDERAL MARITIME COMMISSION	199	117	82	21	17	4						
COUNCIL MARINE RES & ENGR D	18	9	9									
NATIONAL AERO & SPACE COUNC	16	7	9									
NEW ENGLAND REGIONAL COMMIS	4	2	2	3	1	2						
NATIONAL SCIENCE FOUNDATION	950	462	488	2	1	1				11	9	2
NATIONAL COUNCIL ON INDIAN	5	3	2									
NAT LABOR RELATIONS BOARD	695	375	320	1,361	827	534	23	13	10			
NATIONAL MEDIATION BOARD	38	26	12	45	8	37						
NAT AERONAUTICS & SPACE ADM	5,930	4,586	1,344	21,849	18,057	3,792	1	1		19	17	2
NAT CAPITAL PLANNING COMM	60	38	22									
NATIONAL SECURITY COUNCIL	74	34	40									
NAVY	33,148	20,396	12,752	129,031	77,424	51,607	2,240	1,392	848	2,192	1,176	1,016
NATIONAL WATER COMMISSION	35	22	13									
NAT COMM CONSUMER FINAN	13	7	6									
OFFICE OF EMERGENCY PREPARE	221	131	90	79	49	30						
OTHER DEFENSE ACTIVITIES	6,199	3,810	2,389	4,692	3,333	1,359	1	1		299	151	148
OFF OF ECONOMIC OPPORTUNITY	1,271	631	640	1,273	680	593						
OFF OF SCIENCE & TECHNOLOGY	56	24	32									
OFFICE OF THE VICE PRES.	23	6	17									
OZARK REGIONAL COMMISSION	4	2	2	3	2	1						
PANAMA CANAL COMPANY	4	1	3	27	14	13	938	676	262			
COMM ON CONSUMER INTERESTS	23	9	14									
POST OFFICE	17,627	12,930	4,697	601,137	501,253	99,884	2,098	1,919	179	3		3
PUBLIC LAND LAW REVIEW COMM	8	3	5									
FED FIELD COM DEV PLAN ALAS				9	3	6						
RENEGOTIATION BOARD	198	117	81	38	26	12						
AMERICAN REVOLUTION BICENTE	15	8	7									
RAILROAD RETIREMENT BOARD	9	4	5	1,697	740	957						
SUBVERSIVE ACTIVITIES CONT	14	9	5									
SMALL BUSINESS ADMINISTRATI	918	499	419	3,393	1,885	1,508	83	44	39			
SECY OF DEF & JT CHIEFS STA	360	106	254	8	4	4				2		2
SECURITIES AND EXCHANGE COM	940	602	338	444	321	123						
CABINET COMT ON ED.	5	3	2									
U. S. SOLDIER'S HOME	500	311	189									
SMITHSONIAN INSTITUTION	1,711	1,158	553	66	52	14	12	10	2	1	1	
CABT COMT ON OP SPAN SPR	25	14	11									
SELECTIVE SERVICE SYSTEM	228	50	178	6,254	340	5,914	150	50	100			
STATE REGULAR	5,917	3,413	2,504	637	324	313				5,948	4,376	1,572
AGCY FOR INTERNATNL DEVELOP	3,085	1,585	1,500	49	39	10				3,688	3,036	652
PEACE CORPS	663	312	351	76	55	21	13	8	5	370	335	35
U. S. TARIFF COMMISSION	206	120	86	7	5	2						
TRANSPORTATION	8,955	6,046	2,909	50,198	43,530	6,668	719	643	76	277	259	18
OFF SP REP TRADE NEGOTIATIO	24	10	14									
OFFICE OF TELECOM POLICY	43	22	21									
TREASURY	10,367	5,764	4,603	72,591	40,913	31,678	356	275	81	201	167	34
TENNESSEE VALLEY AUTHORITY	4	2	2	8,073	6,327	1,746				5	5	
COMM ON CAMPUS UNREST	14	9	5									
VETERANS ADMINISTRATION	5,115	2,723	2,392	111,489	51,309	60,180	1,123	613	510	23	22	1
ADV GRP ON PRES VOTE PR							3	2	1			
WHITE HOUSE OFFICE	437	205	232									
WATER RESOURCES COUNCIL	25	16	9	4	4							
WH CONF ON CHILD YOUTH	38	12	26									
PRES. COUNCIL ON YOUTH OPPO	1	1										
B/ TOTALS	256,019	146,953	109,066	1,077,067	146,347	530,720	13,105	8,811	4,294	35,531	22,284	3,247

	TOTAL	MEN	WOMEN
ALL AREA TOTALS	1,981,722	324,395	657,327

A/ EXCLUDES D.C. MET AREA
B/ EXCLUDES FOREIGN NATIONALS OVERSEAS

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TABLE A-1

FULL-TIME WHITE COLLAR EMPLOYMENT
BY AGENCY AND GEOGRAPHIC AREA
OCTOBER 31, 1969

AGENCY	D.C. MET AREA			50 STATES A/			TERRITORIES			FOREIGN COUNTRIES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
ADMIN CONFERENCE OF THE U.S.	7	4	3									
AMER BATTLE MONUMENTS COMM	7	2	5									
ADVIS COMM ON INTERGOVT RELAT	35	18	17							37	37	
ARMS CONTROL & DISARM AGENCY	162	72	90									
ATOMIC ENERGY COMMISSION	2,387	1,427	960	4,055	3,337	1,318	9	5	3	16	11	5
AIR FORCE	6,327	2,829	3,498	149,386	85,377	64,009	1,067	573	494	6,950	2,769	4,181
AGRICULTURE	11,422	6,320	5,102	70,425	55,312	15,113	442	335	107	346	305	41
NAT FOUNDTN ON ARTS & HUMAN	75	21	54									
PRES ADV COUN ON EXEC ORGAN	24	13	11									
APPALACHIAN REGIONAL COMM	9	5	4									
ARMY	28,125	15,239	12,916	217,935	125,387	92,548	1,271	719	552	14,908	8,100	6,808
COASTAL PLAINS REGIONAL COMM	5	4	2									
BUREAU OF THE BUDGET	509	324	185									
CIVIL AERONAUTICS BOARD	599	353	246	30	28	2						
COMMISSION ON CIVIL RIGHTS	128	50	78	16	8	8						
COUNCIL OF ECONOMIC ADVISERS	46	24	22									
COMMISSION OF FINE ARTS	5	3	3									
COMM ON REF FED CRIMINAL LAWS	8	2	6									
COMMERCE	14,752	8,973	5,732	9,873	7,092	2,781	85	78	7	161	154	7
CIVIL SERVICE COMMISSION	1,975	861	1,114	2,886	1,328	1,558	9	2	7			
NATIONAL COMM ON VIOLENCE	7	2	5									
CANAL ZONE GOVERNMENT							1,553	743	810			
DEFENSE SUPPLY AGENCY	2,231	1,334	877	42,122	24,523	17,599	10	9	1	14	11	3
JUSTICE	10,536	4,941	5,595	23,329	17,206	6,123	222	159	63	178	120	58
LABOR	5,315	2,433	2,879	4,745	3,016	1,729	59	41	18	14	14	
DELAWARE RIVER BASIN COMM	2	1	1									
EXPORT-IMPORT BANK	316	165	151									
EQUAL EMPLOY OPPORTUNITY COMM	247	105	142	309	165	144						
EXECUTIVE MANSION AND GROUNDS	8	5	3									
FED COAL MINE SAFETY BD OF RE	3	1	2									
FEDERAL COMMUNICATIONS COMM	1,080	612	468	384	268	116	6	5	1			
FED DEPOSIT INSURANCE CORP	570	313	257	1,594	1,284	310	1	1				
FEDERAL RADIATION COUNCIL	4	2	2									
FEDERAL HOME LOAN BANK BOARD	425	233	192	772	635	137						
FARM CREDIT ADMINISTRATION	92	53	39	117	80	37						
FED MEDIATN & CNCILATN SERV	68	33	35	366	279	87						
FEDERAL POWER COMMISSION	924	613	311	140	104	36						
FOREIGN CLAIMS SETTLEMT COMM	37	20	17									
FEDERAL TRADE COMMISSION	942	510	432	283	198	90						
ADV COMM ON ALL VOL ARMED FORCE	12	4	8	2	1	1						
FOUR CORNERS REGIONAL COMM	4	3	1	3	2	1						
UPPER GREAT LAKES REG COMM	2	1	1	1	1							
GENERAL SERVICES ADMIN	6,942	4,723	2,219	11,440	6,287	5,153	22	14	8	10	8	2
HEALTH EDUCATION & WELFARE	22,234	10,732	11,502	67,494	25,398	42,096	404	236	168	174	149	25
HOUSING AND URBAN DEVELOPMENT	4,134	1,858	2,276	9,929	6,489	3,440	226	149	77			
U. S. INFORMATION AGENCY	2,988	1,776	1,212	151	100	51				1,216	979	237
INTERSTATE COMMERCE COMM	1,342	776	566	453	295	158						
INDIAN CLAIMS COMMISSION	29	18	11									
INTER-AG COM MEX-AMER AFFAIRS	21	10	11									
INTERIOR	7,796	4,896	2,900	43,534	30,616	12,918	135	113	22	357	314	43
COMM ON INCOME MAINT PROGRAMS	21	6	15									
ATL-PAC INTEROCEAN CANAL COMM	4	2	2									
JUDICIAL BRANCH	844	469	375	9,689	3,413	2,276	54	32	22			
ARCHITECT OF THE CAPITOL	137	95	42									
BOTANIC GARDEN	5	3	2									
LIBRARY OF CONGRESS	3,569	1,681	1,888							16	12	4

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AGENCY	D.C. MET AREA			50 STATES A/			TERRITORIES			FOREIGN COUNTRIES		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
GENERAL ACCOUNTING OFFICE	2,732	1,731	1,001	1,645	1,434	211				92	79	13
GOVERNMENT PRINTING OFFICE	1,422	605	817	57	24	33						
FEDERAL MARITIME COMMISSION	198	119	79	27	20	7						
COUNCIL MARINE RES & ENGR DEV	18	7	11									
NATIONAL AERO & SPACE COUNCIL	22	12	10									
NEW ENGLAND REGIONAL COMMISSI	4	2	2	2	1	1						
NATIONAL SCIENCE FOUNDATION	896	417	479	2	1	1				13	11	2
NAT LABOR RELATIONS BOARD	740	404	336	1,407	855	552	25	13	12			
NATIONAL MEDIATION BOARD	40	26	14	50	10	40						
NAT AERONAUTICS & SPACE ADMIN	5,950	4,528	1,422	22,936	18,638	4,298	2	2		20	19	1
NAT COMM ON PRODUCT SAFETY	29	15	14									
NAT CAPITAL PLANNING COMM	66	37	29									
NATIONAL SECURITY COUNCIL	58	28	30									
NAVY	35,565	21,479	14,086	136,325	80,257	56,068	2,503	1,560	943	2,805	1,372	1,433
NATIONAL WATER COMMISSION	20	11	9									
OFFICE OF EMERGENCY PREPARED	270	131	139	80	49	31						
OTHER DEFENSE ACTIVITIES	4,543	2,923	1,723	5,017	3,483	1,534	2	1	1	255	128	127
OFF OF ECONOMIC OPPORTUNITY	1,281	644	637	929	468	461						
CABINET TASK FORCE ON OIL IMP	9	5	4									
COMM ON OBSCENITY-PORNOGRAPHY	11	5	6									
OFF OF SCIENCE & TECHNOLOGY	49	22	27									
OZARK REGIONAL COMMISSION	3	1	2	2	2							
PANAMA CANAL COMPANY	3	1	2	28	15	13	937	669	268			
COMM ON CONSUMER INTERESTS	20	7	13									
POST OFFICE	17,539	13,066	4,573	604,489	505,321	99,168	2,005	1,831	174	7	4	3
PUBLIC LAND LAW REVIEW COMM	40	26	14									
FED FIELD COM DEV PLAN ALASKA				10	4	6						
RENEGOTIATION BOARD	179	135	71	35	23	12						
AMERICAN REVOLUTION BICENTENN	6	2	4									
RAILROAD RETIREMENT BOARD	10	5	5	1,667	747	920						
SUBVERSIVE ACTIVITIES CONT BD	14	3	5									
SMALL BUSINESS ADMINISTRATION	929	495	434	3,201	1,756	1,445	75	46	29			
SECY OF DEF & JT CHIEFS STAFF	2,151	1,089	1,062	37	27	10				79	51	28
SECURITIES AND EXCHANGE COMM	904	560	344	425	302	123						
U. S. SOLDIER'S HOME	496	322	174									
SMITHSONIAN INSTITUTION	1,661	1,157	504	56	44	12	12	10	2	1	1	
SELECTIVE SERVICE SYSTEM	207	33	174	6,188	325	5,863	143	46	97			
STATE REGULAR	6,213	3,591	2,622	539	337	202				6,451	4,641	1,810
AGCY FOR INTERNATNL DEVELOPMT	3,395	1,595	1,801	69	58	11				4,169	3,399	770
PEACE CORPS	650	264	386	66	44	22	11	5	6	440	398	42
TAX COURT OF THE U S	157	84	73									
U. S. TARIFF COMMISSION	218	123	95	8	6	2						
TRANSPORTATION	8,291	5,565	2,726	45,163	38,848	6,315	730	647	83	306	288	18
OFF SP REP TRADE NEGOTIATIONS	22	8	14									
TREASURY	9,447	5,090	4,357	73,629	39,499	31,130	378	286	92	216	183	33
TENNESSEE VALLEY AUTHORITY	4	2	2	7,354	5,727	1,627				4	4	
US-MEX BORDER DEV-FRIENDSHIP	6	4	2	5	2	3						
VETERANS ADMINISTRATION	4,998	2,723	2,275	139,358	91,394	58,164	596	390	206	26	24	2
WHITE HSE CONF FOOD, NUTR, HLTH	19	3	16									
WHITE HOUSE OFFICE	303	165	138									
WATER RESOURCES COUNCIL	23	14	9	4	4							
PRES. COUNCIL ON YOUTH OPPORT	4	3	1									
TOTALS B/	251,339	144,238	107,101	1,686,178	1,147,954	538,224	12,994	8,721	4,273	39,281	23,585	15,696

ALL AREA TOTALS	TOTAL	MEN	WOMEN
	1,989,792	1,324,498	665,294

A/ EXCLUDES D.C. MET AREA
B/ EXCLUDES FOREIGN NATIONALS OVERSEAS

INDEX

FULL-TIME WHITE-COLLAR EMPLOYMENT

BY

GENERAL SCHEDULE AND EQUIVALENT GRADES

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE B — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ALL AGENCIES — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	4,754	2,913	68.5	5,533	3,842	69.4	- 23.1	- 24.2
02	24,498	18,576	75.8	25,512	19,500	76.4	- 3.0	- 4.7
03	110,478	86,274	78.1	121,312	95,932	79.1	- 8.9	- 10.1
04	220,496	139,664	63.3	188,134	142,876	75.9	17.2	- 2.2
05	597,043	191,678	32.1	643,013	194,000	30.2	- 7.1	- 1.2
06	135,569	65,089	47.7	133,262	61,457	46.1	2.5	5.9
07	142,711	54,037	37.9	150,895	53,579	35.5	- 5.4	.9
08	48,519	12,431	25.6	47,862	11,402	23.8	1.4	9.0
09	174,045	43,441	24.0	170,769	42,056	24.6	1.9	3.3
10	32,293	3,890	12.0	25,578	3,560	13.9	26.3	9.3
11	155,941	19,325	12.4	155,386	18,332	11.8	.3	5.4
12	137,098	9,870	7.2	131,724	9,136	6.9	4.1	8.0
13	102,271	4,622	4.5	98,667	4,290	4.3	3.7	7.7
14	50,480	1,817	3.6	49,127	1,889	3.8	2.8	- 3.8
15	28,302	942	3.3	26,418	717	2.7	7.1	31.4
16	5,901	104	1.8	6,344	115	1.8	- 6.0	- 9.6
17	2,561	30	1.2	2,498	37	1.5	2.5	- 18.9
18	530	7	1.3	700	4	.6	- 24.3	75.0
ABOVE 18	1,307	17	1.3	656	17	2.6	99.2	
UNGRADED	5,533	2,600	39.8	6,402	2,553	39.9	2.0	1.8
TOTAL B/	1,981,722	657,327	33.2	1,989,792	665,294	33.4	- .4	- 1.2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES. SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES EMPLOYEES OF CENTRAL INTELLIGENCE AGENCY, NATIONAL SECURITY AGENCY BOARD OF GOVERNORS OF FEDERAL RESERVE SYSTEM AND FOREIGN NATIONALS OVERSEAS

16/ 17

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ARCHITECT OF THE CAPITOL — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01								
02								
03								
04	14	4	28,6	14	5	35,7		- 20,0
05	20	13	65,0	16	10	62,5	25,0	30,0
06	13	5	41,7	13	6	46,2	- 7,7	- 16,7
07	21	5	23,8	18	4	22,2	16,7	25,0
08	5	3	60,0	4	3	75,0	25,0	
09	19	9	47,4	19	10	52,6		- 10,0
10	2			3			- 33,3	
11	9	1	11,1	10	2	20,0	- 10,0	- 50,0
12	10	2	20,0	11	2	18,2	- 9,1	
13	11	1	9,1	12			- 8,3	*
14	11			7			57,1	
15	5			2			150,0	
16				6			-100,0	
17	4						*	
18								
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	147	43	29,3	137	42	30,7	7,3	2,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

BOTANIC GARDEN — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02								
03								
04				1	1	100,0	-100,0	-100,0
05	1	1	100,0				*	*
06	1	1	100,0	1	1	100,0		
07								
08								
09								
10	1			1				
11	1			1				
12	1			1				
13								
14								
15								
16								
17								
18								
ABOVE 18								
UNGRADED								
TOTAL B/	5	2	40,0	5	2	40,0		

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY CUMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

LIBRARY OF CONGRESS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	2			1			100.0	
02	74	53	71.6	89	60	67,4	- 16,9	- 11,7
03	227	129	56,8	260	161	61.9	- 12,7	- 19,9
04	422	276	65,4	442	277	62.7	- 4,5	- ,4
05	482	277	57,5	420	257	61.2	14,8	7,8
06	295	174	58,0	310	163	52,6	- 4,8	6,7
07	426	239	56.1	429	254	59.2	- ,7	- 5,9
08	93	49	52,7	75	38	50,7	24.0	28,9
09	408	231	56,6	434	248	57,1	- 5.0	- 6,9
10	25	11	44,0	17	9	52,9	47.1	22,2
11	382	199	52,1	425	222	52,2	- 10.1	- 10,4
12	278	136	48,9	267	111	41,6	4,1	22.5
13	188	56	29,8	180	52	28,9	4,4	7.7
14	100	27	27,0	109	26	23,9	- 8,3	3.8
15	71	11	15.5	75	9	12,0	- 5,3	22,2
16	26	1	3.8	25	3	12,0	4,0	- 66,7
17	26	3	11.5	18	1	5,6	44,4	200,0
18	5	1	20.0	7	1	14,3	- 28,6	
ABOVE 18	3			2			50,0	
UNGRADED								
TOTAL B/	3,533	1,873	53,0	3,585	1,892	52,8	- 1,5	- 1.0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY CUMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

GENERAL ACCOUNTING OFFICE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	6	3	50,0	14	7	50,0	- 57,1	- 57,1
02	51	41	80,4	55	47	85,5	- 7,3	- 12,8
03	236	191	80,9	255	205	80,4	- 7,5	- 6,8
04	284	231	81,3	287	233	81,2	- 1,0	- ,9
05	237	199	83,0	219	181	82,6	8,2	9,9
06	128	119	92,0	119	110	92,4	7,6	8,2
07	495	138	27,9	505	153	30,3	- 1,0	- 9,8
08	87	38	43,7	104	46	44,2	- 16,3	- 17,4
09	718	144	20,1	591	134	22,7	21,5	7,5
10	14	4	28,6	14	5	35,7		- 20,0
11	496	78	15,7	528	78	14,8	- 6,1	
12	605	26	4,3	616	17	2,8	- 1,8	52,9
13	636	9	1,4	556	5	,9	14,4	80,0
14	414	4		384	4	1,0	7,8	
15	152			156			- 2,6	
16	46			44			4,5	
17	16			12			33,3	
18	9			8			12,5	
ABOVE 18	3			2			50,0	
UNGRADED								
TOTAL B/	4,533	1,225	25,4	4,469	1,225	27,4	3,7	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

GOVERNMENT PRINTING OFFICE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	5	5	100,0	4	4	100,0	25,0	25,0
02	62	53	85,5	74	62	83,8	- 16,2	- 14,5
03	340	244	71,8	395	273	69,1	- 13,9	- 10,6
04	312	193	61,9	334	197	58,0	- 6,6	- 2,0
05	237	156	65,8	219	147	67,1	8,2	6,1
06	106	68	64,2	73	46	63,0	45,2	47,8
07	108	57	52,8	96	55	57,3	12,5	3,6
08	32	20	62,5	14	11	78,6	128,6	81,8
09	64	28	43,8	65	25	38,5	- 1,5	12,0
10	7	5	71,4	5	4	80,0	40,0	25,0
11	57	14	24,6	56	17	30,4	1,8	- 17,6
12	51	8	15,7	45	5	11,1	13,3	60,0
13	42	2	4,8	35	1	2,9	20,0	100,0
14	34	2	5,9	31	3	9,7	9,7	- 33,3
15	15			21			- 28,6	
16	14			9			55,6	
17	6						*	
18	1			1				
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	1,495	855	57,2	1,479	850	57,5	1,1	,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

JUDICIAL BRANCH — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02	4	4	100,0	7	6	85,7	- 42,9	- 33,3
03	9	9	100,0	8	7	87,5	12,5	28,6
04	13	13	72,2	15	11	73,3	20,0	18,2
05	25	21	84,0	29	23	79,3	- 13,8	- 8,7
06	27	27	100,0	20	20	100,0	35,0	35,0
07	35	32	91,4	37	33	89,2	- 5,4	- 3,0
08				2	2	100,0	-100,0	-100,0
09	18	13	72,2	14	9	64,3	28,6	44,4
10	3	2	66,7	2	1	50,0	50,0	100,0
11	11	4	36,4	9	5	55,6	22,2	- 20,0
12	5	1	20,0	5	2	40,0		- 50,0
13	5	1	20,0	6	1	16,7	- 16,7	
14	10			7			42,9	
15	8			8				
16	1			1				
17	4			4				
18	1			1				
ABOVE 18	11			10			10,0	
UNGRADED	5,533	2,600	39,8	6,402	2,553	39,9	2,0	1,8
TOTAL B/	5,723	2,727	40,5	6,587	2,673	40,6	2,1	2,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

WHITE HOUSE OFFICE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	13	3	23,1				*	*
03				2			-100,0	
04	24	7	29,2	9	1	11,1	166.7	600,0
05	55	27	49,1	23	5	21,7	139,1	440.0
06	64	37	71,2	27	20	74,1	92,6	85.0
07	52	36	69,2	38	24	63,2	36,8	50.0
08	34	21	61,8	27	18	66,7	25,9	16,7
09	41	32	78,0	28	20	71,4	46,4	60.0
10	26	22	84,6	15	11	73,3	73,3	100,0
11	29	24	82,8	23	19	82,6	26,1	26,3
12	22	13	59,1	24	11	45,8	- 8,3	18,2
13	12	5	41,7	8	3	37,5	50,0	66,7
14	12			18			- 33.3	
15	20	4	20,0	14	3	21,4	42.9	33,3
16	6			10			- 40,0	
17	7	1	14,3	14	3	21,4	- 50,0	- 66,7
18				1			-100,0	
ABOVE 18	32			22			45,5	
UNGRADED								
TOTAL B/	437	232	53,1	303	138	45,5	44,2	68,1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OFFICE OF MANAGEMENT AND BUDGET WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	1			7	1	14,3	- 85,7	-100,0
03	7	4	57,1	2			250,0	*
04	6	4	66,7	4	3	75,0	50,0	33,3
05	16	13	81,3	15	11	73,3	6,7	18,2
06	32	29	90,6	27	24	88,9	18,5	20,8
07	56	50	89,3	62	58	93,5	- 9,7	- 13,8
08	46	44	95,7	32	32	100,0	43,8	37,5
09	37	31	83,8	37	28	75,7		10,7
10	3	3	100,0	2	1	50,0	50,0	200,0
11	31	13	41,9	24	8	33,3	29,2	62,5
12	31	4	12,9	37	5	13,5	- 16,2	- 20,0
13	55	7	12,7	41	3	7,3	34,1	133,3
14	68	6	8,8	69	5	7,2	- 1,4	20,0
15	96	2	2,1	76	4	5,3	26,3	- 50,0
16	37	3	8,1	41	2	4,9	- 9,8	50,0
17	16			14			14,3	
18	14			14				
ABOVE 18	12			5			140,0	
UNGRADED								
TOTAL B/	564	213	37,8	509	185	36,3	10,8	15,1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

COUNCIL OF ECONOMIC ADVISERS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02				1			-100,0	
03	1			1				
04				2			-100,0	
05	1						*	
06	2	2	100,0	1	1	100,0	100,0	100,0
07	2	2	100,0	5	3	60,0	- 60,0	- 33,3
08	9	9	100,0	6	6	100,0	50,0	50,0
09	5	2	40,0	7	7	100,0	- 28,6	- 71,4
10	6	5	83,3				*	*
11	2	2	100,0	3	3	100,0	- 33,3	- 33,3
12	2	2	100,0	2	1	50,0		100,0
13	2	1	50,0	1			100,0	*
14	2			2				
15	4			3			33,3	
16	2			4			- 50,0	
17	6	1	16,7	4	1	25,0	50,0	
18				1			-100,0	
ABOVE 18	4			3			33,3	
UNGRADED								
TOTAL B/	50	26	52,0	46	22	47,8	8,7	18,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NATIONAL SECURITY COUNCIL WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02								
03	1	1	100,0	2	1	50,0	- 50,0	
04	3	1	33,3	1			200,0	*
05	4	3	75,0	5	2	40,0	- 20,0	50,0
06	5	3	60,0	2	2	100,0	150,0	50,0
07	9	9	100,0	7	6	85,7	28,6	50,0
08	5	5	100,0	7	6	85,7	- 28,6	- 16,7
09	16	12	75,0	10	9	90,0	60,0	33,3
10	2	1	50,0	1			100,0	*
11	5	3	60,0	4	3	75,0	25,0	
12	2	1	50,0	2				*
13	9	1	11,1	6	1	16,7	50,0	
14	4			2			100,0	
15	3			2			50,0	
16	2			2				
17	3			2			50,0	
18	1			3			- 66,7	
ABOVE 18								
UNGRADED								
TOTAL B/	74	40	54,1	58	30	51,7	27,6	33,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OFF OF ECONOMIC OPPORTUNITY WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	26	16	61,5	13	9	69,2	100,0	77,8
02	24	24	100,0	32	27	84,4	- 25,0	- 11,1
03	114	95	83,3	94	82	87,2	21,3	15,9
04	149	126	85,1	118	101	85,6	25,4	24,8
05	232	209	90,1	227	196	86,3	2,2	6,6
06	167	148	88,6	153	137	89,5	9,2	8,0
07	225	176	78,2	243	171	70,4	- 7,4	2,9
08	33	30	90,9	26	24	92,3	26,9	25,0
09	247	144	58,3	180	106	58,9	37,2	35,8
10	1			2	1	50,0	- 50,0	-100,0
11	195	84	42,9	189	80	42,3	3,7	5,0
12	295	70	23,7	283	70	24,7	4,2	
13	363	64	17,6	270	54	20,0	34,4	18,5
14	264	35	13,3	216	26	12,0	22,2	34,6
15	169	11	6,5	118	12	10,2	43,2	- 8,3
16	17			21			- 19,0	
17	13			18	2	11,1	- 27,8	-100,0
18	5	1	20,0	6			- 16,7	*
ABOVE 18	5			1			400,0	
UNGRADED								
TOTAL B/	2,544	1,233	48,5	2,210	1,098	49,7	15,1	12,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OFFICE OF EMERGENCY PREPARED — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	1	1	100,0	2	1	50,0	- 50,0	
03	7	5	71,4	9	8	88,9	- 22,2	- 37,5
04	10	8	80,0	9	7	77,8	11,1	14,3
05	9	8	88,9	15	13	86,7	- 40,0	- 38,5
06	26	22	84,6	31	29	93,5	- 16,1	- 24,1
07	31	25	80,6	36	28	77,8	- 13,9	- 10,7
08	12	12	100,0	13	12	92,3	- 7,7	
09	22	19	86,4	24	20	83,3	- 8,3	- 5,0
10	4	4	100,0	4	4	100,0		
11	13	6	46,2	21	11	52,4	- 38,1	- 45,5
12	14	6	42,9	13	5	38,5	7,7	20,0
13	27	3	11,1	25	1	4,0	8,0	200,0
14	33	1	3,0	30	1	3,3	10,0	
15	65			88			- 26,1	
16	8			9			- 11,1	
17	8			10			- 20,0	
18	6			7			- 14,3	
ABOVE 18	4			4				
UNGRADED								
TOTAL B/	300	120	40,0	350	140	40,0	- 14,3	- 14,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OFF OF SCIENCE & TECHNOLOGY WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	1			1				
03								
04	1	1	100,0	1	1	100,0		
05	2	1	50,0	2	1	50,0		
06				3	3	100,0	-100,0	-100,0
07	9	9	100,0	3	3	100,0	200,0	200,0
08	14	14	100,0	14	14	100,0		
09	4	4	100,0	4	3	75,0		33,3
10	3	2	66,7	1	1	100,0	200,0	100,0
11								
12	1	1	100,0	1	1	100,0		
13								
14								
15	3			3				
16	2			3			- 33,3	
17	4			4				
18	10			7			42,9	
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	56	32	57,1	49	27	55,1	14,3	18,5

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OFF SP REP TRADE NEGOTIATIONS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02								
03								
04				1	1	100,0	-100,0	-100,0
05	2	2	100,0				*	*
06	1	1	100,0				*	*
07	2	1	50,0				*	*
08	2	2	100,0	4	4	100,0	- 50,0	- 50,0
09	3	3	100,0	5	5	100,0	- 40,0	- 40,0
10	3	3	100,0				*	*
11				1	1	100,0	-100,0	-100,0
12				2	2	100,0	-100,0	-100,0
13	1	1	100,0	1				*
14	1			1				
15	2	1	50,0	2	1	50,0		
16	2			1			100,0	
17	2			1			100,0	
18	2			1			100,0	
ABOVE 18	1			2			- 50,0	
UNGRADED								
TOTAL B/	24	14	58,3	22	14	63,6	9,1	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

STATE CONSOLIDATED (INCL. AID & PEACE CORPS) WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	9	5	55,6	15	10	66,7	- 40,0	- 50,0
02	115	69	60.0	136	71	52,2	- 15,4	- 2,8
03	235	184	78,3	237	181	76,4	- ,8	1,7
04	535	439	82,1	592	472	79,7	- 9,6	- 6,0
05	914	718	78,6	963	702	72,9	- 5,1	2,3
06	1,441	1,037	71,0	1,562	1,098	70,3	- 7,7	- 5,6
07	1,944	1,271	65,4	2,137	1,400	65,5	- 9,0	- 9,2
08	1,496	885	59,2	1,571	939	59,8	- 4,8	- 5,8
09	1,941	876	45,1	2,136	974	45,6	- 9,1	- 10,1
10	1,503	355	23,6	1,704	398	23,4	- 11,8	- 10,8
11	445	249	55,0	431	246	57,1	3,2	1,2
12	2,179	353	16,2	2,437	383	15,7	- 10,6	- 7,8
13	2,696	292	10,8	2,928	343	11,7	- 7,9	- 14,9
14	2,598	153	5,9	2,599	173	6,7	-	- 11,6
15	406	35	8,6	443	36	8,1	- 8,4	- 2,8
16	1,215	33	2,7	1,183	37	3,1	2,7	- 10,8
17	570	5	,9	548	5	,9	4,0	
18	2			10			- 80,0	
ABOVE 18	203	4	1,0	172	4	2,3	18,0	
UNGRADED								
TOTAL B/	20,446	6,963	34,1	21,804	7,472	34,3	- 6,2	- 6,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

TREASURY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	132	84	63,6	247	171	69,2	- 46,6	- 50,9
02	2,279	1,958	85,9	2,746	2,407	87,7	- 17,0	- 18,7
03	7,132	6,274	87,0	7,804	6,941	88,9	- 8,6	- 9,6
04	9,733	8,491	87,2	8,958	7,788	86,9	8,7	9,0
05	9,210	6,998	75,0	8,766	6,686	76,3	5,1	4,7
06	5,514	4,289	77,8	4,881	3,828	78,4	12,0	12,0
07	8,409	3,796	45,1	6,906	3,544	51,3	21,7	7,1
08	1,088	560	51,5	1,089	520	47,8	- ,1	7,7
09	8,738	2,294	26,3	9,846	2,274	23,1	- 11,3	,9
10	611	134	21,9	662	112	16,9	- 7,7	19,6
11	10,941	920	8,4	10,479	818	7,8	4,4	12,5
12	9,705	390	4,3	8,378	328	3,9	7,5	18,9
13	5,620	152	2,3	6,124	137	2,2	8,1	10,9
14	2,634	38	1,4	2,349	39	1,7	12,2	- 2,6
15	1,092	14	1,3	1,047	16	1,5	4,3	- 12,5
16	217			228			- 4,8	
17	96	2	2,1	101	2	1,0	- 4,0	
18	44	2	4,5	40	1	2,5	10,0	100,0
ABOVE 18	19			19				
UNGRADED								
TOTAL B/	83,515	36,396	43,6	80,670	35,612	44,1	3,5	2,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SECY OF DEF & JT CHIEFS STAFF WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	---- WOMEN ----		TOTAL	---- WOMEN ----			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	1	1	100,0	5	3	60,0	- 80,0	- 66,7
03	8	7	87.5	21	13	61,9	- 61,9	- 46,2
04	10	10	100,0	57	45	78,9	- 82,5	- 77,8
05	59	38	64,4	157	116	73,9	- 62,4	- 67,2
06	99	86	86,9	357	335	93,8	- 72.3	- 74,3
07	85	69	81,2	346	319	92,2	- 75,4	- 78,4
08	19	17	89,5	109	107	98,2	- 82,6	- 84,1
09	24	15	62,5	112	80	71,4	- 78,6	- 81,3
10	2	2	100,0	19	17	89,5	- 89,5	- 88,2
11	19	11	57,9	72	34	47,2	- 73,6	- 67,6
12	13	4	30,8	55	13	23,6	- 76,4	- 69,2
13	10			89	11	12,4	- 88,8	-100,0
14	10			175	3	1,7	- 94,3	-100.0
15	9			442	4	,9	- 97,0	-100.0
16	1			112			- 99,1	
17	1			78			- 98,7	
18				40			-100,0	
ABOVE 18				21			-100,0	
UNGRADED								
TOTAL B/	370	260	70,3	2,267	1,100	48,5	- 83,7	- 76,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES
(INCL. ATL.-PAC. INTEROCEAN CANAL STUDY COMM.)
ARMY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	227	151	66,5	190	127	66,8	19,5	18,9
02	3,466	2,735	78,9	5,158	4,191	81,3	- 32,8	- 34,7
03	20,700	16,757	83,8	24,035	20,441	85,0	- 16,8	- 18,0
04	34,613	26,796	77,4	37,830	29,343	77,6	- 8,5	- 8,7
05	33,400	23,126	69,2	35,752	24,701	69,1	- 6,6	- 6,4
06	20,042	9,316	46,5	19,841	9,427	47,5	1,0	- 1,2
07	24,695	9,870	39,0	25,635	10,702	41,7	- 3,7	- 7,8
08	5,344	1,836	34,4	5,190	1,959	37,7	2,0	- 6,3
09	25,915	5,994	23,1	27,212	5,946	21,9	- 4,8	,8
10	2,715	386	14,2	2,758	386	13,0	- 1,6	
11	27,709	3,525	12,7	29,188	3,543	12,1	- 4,7	- ,5
12	24,407	1,522	6,2	25,225	1,560	6,2	- 3,2	- 2,4
13	15,350	426	2,8	15,671	430	2,7	- 2,0	- ,9
14	5,794	56		5,975	60	1,0	- 3,0	- 6,7
15	2,109	10	,5	2,206	8	,4	- 4,4	25,0
16	197			233			- 15,5	
17	93			105			- 11,4	
18	7	1	14,3	31	2	6,5	- 77,4	- 50,0
ABOVE 18	68			8			750,0	
UNGRADED								
TOTAL B/	246,250	102,507	41,6	262,243	112,826	43,0	- 6,1	- 9,1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NAVY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	214	140	65,4	297	196	65,0	- 27,9	- 28,6
02	2,882	2,111	73,2	4,278	3,200	74,8	- 32,6	- 34,0
03	15,816	14,267	84,8	20,571	17,453	84,8	- 18,3	- 18,3
04	25,242	17,749	70,3	27,370	19,305	70,5	- 7,8	- 8,1
05	20,013	13,711	68,5	21,239	14,245	67,1	- 5,8	- 3,7
06	8,060	5,368	66,6	7,847	5,131	65,4	2,7	4,6
07	12,596	5,414	42,0	14,097	5,674	40,2	- 10,6	- 4,6
08	2,822	917	32,5	2,834	864	30,5	- ,4	6,1
09	19,101	3,151	16,5	19,999	3,144	15,7	- 4,5	,2
10	2,235	165	7,4	2,208	177	8,0	1,2	- 6,8
11	20,034	1,894	9,5	20,295	1,867	9,2	- 1,3	1,4
12	16,892	879	5,2	16,745	844	5,0	,9	4,1
13	11,899	357	3,0	11,917	331	2,8	- ,2	7,9
14	5,047	76	1,5	4,821	78	1,6	4,7	- 2,6
15	2,257	21	,9	2,192	19	,9	2,0	10,5
16	309	2	,6	310	2	,6	- ,3	
17	101			132			- 23,5	
18	9			39			- 76,9	
ABOVE 18	82	1	1,2	7			*	*
UNGRADED								
TOTAL B/	165,511	66,223	39,7	177,198	72,530	40,9	- 5,0	- 8,7

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

AIR FORCE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	129	111	86,0	245	204	83,3	- 47,3	- 45,6
02	1,131	969	85,7	1,479	1,238	83,7	- 23,5	- 21,7
03	13,111	11,340	86,5	14,936	13,155	88,1	- 12,2	- 13,8
04	21,771	17,956	84,4	23,807	19,771	84,8	- 8,7	- 9,2
05	22,662	16,592	73,2	23,999	17,431	72,6	- 5,6	- 4,8
06	9,014	5,756	63,9	9,007	5,747	63,8	,1	,2
07	14,785	5,752	40,3	14,925	6,034	40,4	- 4,3	- 4,7
08	4,257	978	22,0	4,095	916	22,4	3,0	6,8
09	20,814	4,155	19,0	21,850	4,313	19,7	- 4,7	- 3,7
10	1,521	188	12,4	1,532	202	13,2	- ,7	- 6,9
11	19,599	1,973	10,6	19,109	1,971	10,3	- 2,7	,1
12	14,432	905	6,3	14,771	886	5,0	- 2,3	2,1
13	9,438	274	2,9	9,601	269	2,8	- 1,7	1,9
14	3,309	38	1,1	3,370	39	1,2	- 1,8	- 2,6
15	1,202	5	,4	1,196	6	,5	,5	- 16,7
16	154			186			- 17,2	
17	91			95			- 4,2	
18	8			20			- 60,0	
ABOVE 18	49			7			600,0	
UNGRADED								
TOTAL B/	155,477	66,992	43,1	163,730	72,182	44,1	- 5,0	- 7,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OTHER DEFENSE ACTIVITIES (INCL. DEFENSE SUPPLY AGENCY) — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	69	53	76,8	109	84	77,1	- 36,7	- 36,9
02	527	448	85,0	842	729	86,6	- 37,4	- 38,5
03	2,875	2,521	87,7	3,365	2,964	88,1	- 14,6	- 14,9
04	6,246	5,372	86,0	7,093	6,103	86,0	- 11,9	- 11,0
05	5,923	4,701	79,4	6,265	4,906	78,3	- 5,5	- 4,2
06	2,230	1,834	82,2	1,849	1,499	81,1	20,6	22,3
07	3,996	2,142	53,6	4,425	2,140	48,4	- 9,7	,1
08	517	316	60,9	478	232	48,5	8,6	36,2
09	8,395	1,665	19,8	9,085	1,701	18,7	- 7,6	- 2,1
10	300	62	20,7	415	50	12,0	- 27,7	24,0
11	9,369	995	10,6	9,529	946	9,9	- 1,7	5,2
12	5,674	353	6,2	5,711	350	6,1	- ,6	,9
13	3,190	143	4,5	3,202	137	4,3	- ,4	4,4
14	1,404	31	2,2	1,249	24	1,9	12,4	29,2
15	1,022	4	,4	586			74,4	*
16	169	1	,6	61			182,3	*
17	88			21			319,0	
18	31			6			416,7	
ABOVE 18	62			3			*	
UNGRADED								
TOTAL B/	52,080	20,641	39,6	54,294	21,865	40,3	- 4,1	- 5,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

JUSTICE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	29	17	60,7	26	20	76,9	7,7	- 15,0
02	532	312	58,6	657	445	67,7	- 19,0	- 29,9
03	4,151	2,842	68,5	3,364	2,616	77,8	23,4	8,6
04	4,049	3,318	81,0	3,339	2,869	85,9	21,2	15,7
05	3,719	2,988	80,4	3,453	2,829	81,9	7,7	5,6
06	2,729	1,582	57,0	2,174	1,417	65,2	25,5	11,6
07	3,722	1,081	29,0	3,483	863	24,8	6,9	25,3
08	1,577	338	21,4	2,052	305	14,9	- 23,1	10,8
09	2,769	262	9,4	2,385	239	10,0	16,9	9,6
10	2,149	74	3,4	1,817	59	3,2	18,2	25,4
11	2,915	119	4,1	2,933	102	3,5	- ,6	16,7
12	2,487	86	3,5	2,068	73	3,5	20,3	17,8
13	4,444	53	1,2	4,321	43		2,9	23,3
14	1,297	39	3,0	1,168	38	3,3	11,0	2,6
15	954	21	2,5	788	16	2,0	8,4	31,3
16	243	5	2,1	175	2	1,1	38,9	150,0
17	119	1	,8	101	2	1,0	16,8	- 50,0
18	35			36			- 2,8	
ABOVE 18	39			25	1	4,0	56,0	-100,0
UNGRADED								
TOTAL B/	37,875	13,138	34,7	34,365	11,939	34,7	10,2	10,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

POST OFFICE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	2,106	1,533	72,8	3,298	2,363	71,6	- 36,1	- 35,1
02	888	621	69,9	843	570	67,6	5,3	8,9
03	1,151	804	69,9	998	660	66,1	15,3	21,8
04	47,109	9,347	19,8	7,329	5,820	79,4	542,8	60,6
05	434,479	77,477	17,8	481,300	81,393	16,9	- 9,7	- 4,8
06	51,189	10,585	20,7	51,955	9,376	18,0	- 1,5	12,9
07	21,918	2,403	10,0	30,806	2,127	6,9	- 28,9	12,0
08	19,514	991	5,1	19,813	854	4,3	- 1,5	16,0
09	20,973	612	2,9	13,869	439	3,2	51,2	39,4
10	9,573	146	1,5	4,766	96	2,0	100,9	52,1
11	5,208	108	2,1	2,818	111	3,9	84,8	- 2,7
12	3,084	77	2,5	3,119	61	1,0	- 1,1	26,2
13	2,387	46	1,9	2,136	34	1,6	11,8	35,3
14	707	6	,8	551	8	1,5	28,3	- 25,0
15	386	5	1,3	346	3	,9	11,6	66,7
16	135	2	1,5	140	3	2,1	- 2,9	- 33,3
17	38			31			22,6	
18				11			- 45,5	
ABOVE 18	13			11			18,2	
UNGRADED								
TOTAL B/	629,865	104,763	16,9	624,140	103,918	16,6	- ,5	,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATE WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

INTERIOR (INCL. EXEC. MANSION AND GROUNDS) — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	75	21	28,0	71	35	49,3	5,6	- 40,0
02	805	379	47.1	750	304	40,5	7,3	24,7
03	3,175	2,185	68,8	3,010	2,073	68,9	5,5	5,4
04	5,319	3,733	70,2	5,352	3,754	70,1	- ,6	- ,6
05	5,687	3,432	60,3	5,798	3,474	59,9	1,9	- 1,2
06	2,442	1,427	58,4	2,399	1,440	60,0	1,8	- ,9
07	5,005	1,668	33,3	5,210	1,697	32,6	- 3,9	- 1,7
08	605	191	31,6	584	205	35,1	3,6	- 6,8
09	7,439	2,040	26,7	7,738	1,946	25,1	- 1,3	4,8
10	419	49	11,0	378	51	13,5	8,5	- 3,9
11	7,155	555	7,8	7,030	514	7.3	1,8	7,0
12	6,081	220	3,6	6,262	242	3,9	- 2,9	- 9,1
13	3,728	109	2,9	3,837	98	2,6	- 2,8	11,2
14	2,149	37	1,7	2,094	36	1,7	2,6	2,8
15	1,088	14	1,3	1,081	16	1,5	,6	- 12,5
16	141			142			- ,7	
17	54	1	1,9	52	1	1,9	3,8	
18	18			23			- 56,5	
ABOVE 18	28			19			47,4	
UNGRADED								
TOTAL B/	51,596	16,061	31,1	51,830	15,886	30,7	- ,5	1.1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

AGRICULTURE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	114	58	50,9	96	55	57,3	18,8	5,5
02	1,145	500	43,7	1,025	511	49,9	11,7	- 2,2
03	4,277	2,704	63,2	4,329	3,121	72,1	- 1,2	- 13,4
04	8,194	5,874	71,7	9,259	7,000	75,6	- 11,5	- 16,1
05	15,352	5,674	54,8	8,942	4,286	47,9	15,8	32,4
06	4,504	1,725	37,5	4,389	1,542	35,1	4,9	11,9
07	13,514	2,100	15,5	13,034	1,962	15,1	3,7	7,0
08	991	184	18,6	1,008	169	16,8	- 1,7	8,9
09	12,692	867	6,8	12,636	793	6,3	,4	9,3
10	275	28	10,2	192	25	13,0	43,2	12,0
11	11,933	468	3,9	11,718	441	3,8	1,8	6,1
12	7,960	266	3,3	7,733	257	3,3	2,9	3,5
13	4,852	143	2,9	4,745	133	2,8	2,3	7,5
14	2,278	49	2,2	2,219	52	2,3	2,7	- 5,8
15	1,078	12	1,1	1,023	13	1,3	5,4	- 7,7
16	188	3	1,6	185	2	1,1	1,6	50,0
17	54			60	1	1,7	- 10,0	-100,0
18	26			25			4,0	
ABOVE 18	26	1	3,8	17			52,9	*
UNGRADED								
TOTAL B/	84,553	20,656	24,4	82,635	20,363	24,6	2,3	1,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

COMMERCE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	261	199	76.2	108	72	66.7	141.7	176.4
02	3,066	2,532	82.6	729	535	73.4	320.6	373.3
03	1,655	1,358	82.1	1,531	1,228	80.2	8.1	10.6
04	2,158	1,659	76.9	1,859	1,439	78.5	16.1	13.7
05	2,712	2,020	74.5	2,260	1,703	75.4	20.0	18.6
06	1,433	1,106	77.2	1,336	1,010	75.6	7.3	9.5
07	2,133	983	46.1	1,875	855	45.6	13.8	14.0
08	792	263	33.2	834	217	26.0	- 5.0	21.2
09	2,743	634	23.1	3,206	599	18.7	- 14.4	5.8
10	1,282	89	6.9	451	34	7.5	184.3	161.8
11	2,752	414	15.0	2,338	346	14.8	17.7	19.7
12	2,928	309	10.6	2,578	257	9.0	13.6	20.2
13	2,673	187	6.0	2,430	159	6.5	10.1	17.6
14	1,928	75	3.9	1,730	75	4.3	11.3	
15	1,344	27	2.0	1,201	25	2.1	12.1	8.0
16	271	2	.7	259	3	1.2	4.6	- 33.3
17	112			98			14.3	
18	29			31			- 9.7	
ABOVE 18	35			17			105.9	
UNGRADED								
TOTAL B/	30,308	11,857	39.1	24,871	8,577	34.5	21.9	38.2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

LABOR — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	21	17	80,0	54	51	94,4	- 61,1	- 66,7
02	153	129	84,3	150	125	83,3	2,0	3,2
03	429	351	81,8	488	401	82,2	- 12,1	- 12,5
04	751	656	87,4	764	658	86,1	- 1,7	- ,3
05	1,313	1,131	86,1	1,323	1,171	88,5	- ,8	- 3,4
06	791	756	95,6	622	589	94,7	27,2	28,4
07	813	564	69,2	656	448	68,3	24,2	25,9
08	85	76	89,4	74	65	87,8	14,9	16,9
09	579	287	50,4	632	329	52,1	- 9,8	- 12,8
10	22	18	81,8	24	20	83,3	- 8,3	- 10,0
11	863	264	30,6	991	265	26,7	- 12,9	- ,4
12	1,824	246	13,5	1,767	210	11,9	3,2	17,1
13	1,265	186	14,7	1,110	155	13,0	13,0	20,0
14	948	107	11,3	918	89	9,7	3,1	20,2
15	459	42	7,5	448	42	9,4	24,8	
16	59	5	8,5	67	6	8,0	- 11,9	- 16,7
17	30	2	6,7	28	2	7,1	7,1	
18	7			8			- 12,5	
ABOVE 18	12			12				
UNGRADED								
TOTAL B/	10,515	4,837	46,0	10,136	4,626	45,6	3,7	4,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES. SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

HEALTH EDUCATION & WELFARE — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	237	162	68.4	132	86	65.2	79.5	88.4
02	2,742	2,324	84.8	765	593	77.5	258.4	291.9
03	9,936	8,632	86.9	8,610	7,490	86.0	15.4	15.2
04	12,706	10,864	85.5	12,776	10,844	84.9	- .5	.2
05	11,983	9,593	80.7	10,808	8,744	80.9	9.9	9.7
06	10,154	8,800	86.7	10,115	8,942	88.4	.4	- 1.6
07	7,469	5,317	71.9	6,964	4,888	70.2	10.1	12.9
08	3,222	2,059	63.9	2,509	1,613	64.3	28.4	27.7
09	9,984	5,531	55.0	9,211	5,036	54.7	7.3	9.8
10	3,543	1,101	31.0	2,942	1,045	35.5	20.6	5.4
11	7,059	2,156	30.5	6,946	1,782	25.7	1.6	20.0
12	8,735	1,238	14.0	6,583	1,048	15.9	35.7	27.7
13	5,459	991	18.9	4,959	875	17.6	18.1	13.3
14	3,769	506	13.4	3,964	613	15.5	- 5.0	- 17.5
15	2,972	347	11.7	2,026	180	8.9	46.7	92.8
16	417	17	4.1	775	35	4.5	- 46.2	- 51.4
17	137	6	4.4	121	5	4.1	13.2	20.0
18	17			71			- 76.1	
ABOVE 18	104	2	1.9	29	2	6.9	258.6	
UNGRADED								
TOTAL B/	101,245	59,946	59.2	90,306	53,821	59.6	12.1	11.4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

HOUSING AND URBAN DEVELOPMENT WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	20	13	65,0	16	11	68,8	25,0	18,2
02	151	129	85,4	142	121	85,2	6,3	6,6
03	683	594	86,0	701	588	83,9	- 2,6	1,0
04	1,492	1,315	88,1	1,462	1,307	89,4	2,1	,6
05	1,541	1,335	86,6	1,543	1,345	87,2	- ,1	- ,7
06	886	805	90,9	798	705	88,3	11,0	14,2
07	967	662	68,5	878	616	70,2	10,1	7,5
08	168	145	86,3	134	112	82,0	24,4	29,5
09	1,145	387	33,8	1,283	388	30,2	- 10,8	- ,3
10	46	29	63,0	43	23	53,5	6,0	26,1
11	2,742	296	10,8	2,656	252	9,5	3,2	17,5
12	2,054	204	9,9	1,885	152	8,1	8,0	34,2
13	1,481	111	7,5	1,407	103	7,3	5,3	7,8
14	855	54	6,3	786	46	5,9	8,8	17,4
15	536	26	4,9	448	23	5,1	19,6	13,0
16	70	1	1,4	57			22,8	*
17	28	1	3,6	25	1	4,0	12,0	
18	5			6			- 16,7	
ABOVE 18	17			18			- 5,6	
UNGRADED								
TOTAL B/	14,887	6,107	41,0	14,289	5,793	40,5	4,2	5,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

TRANSPORTATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	27	19	70.4	30	17	56,7	- 10,0	11,8
02	215	144	66,7	185	137	74,1	16,8	5,1
03	1,733	823	79,3	1,074	858	79,9	- 3,4	- 4,1
04	2,813	2,276	80,8	2,677	2,249	84,0	5,3	1,2
05	3,973	2,567	64,3	3,241	2,418	74,6	19,5	6,2
06	1,505	1,325	73,4	1,687	1,213	71,9	7,1	9,2
07	4,514	1,034	22,4	3,299	939	28,5	39,9	10,1
08	320	182	56,9	287	151	52,6	11,5	20,5
09	5,528	548	8,3	6,566	504	7,7	,9	8,7
10	2,390	79	3,3	2,288	78	3,4	4,5	1,3
11	9,661	323	3,3	10,707	285	2,7	- 9,8	13,3
12	10,594	201	1,9	8,432	173	2,1	25,6	16,2
13	9,591	101	1,1	8,287	86	1,0	15,7	17,4
14	4,504	32	,7	3,874	24	,6	16,3	33,3
15	1,690	14	,8	1,510	7	,5	11,9	100,0
16	196	1	,5	184	1	,5	6,5	
17	101			98	1	1,0	3,1	-100,0
18	31	1	3,2	41			- 24,4	*
ABOVE 18	51	1	1,0	23	1	4,3	121,7	
UNGRADED								
TOTAL B/	60,149	9,671	16,1	54,490	9,142	16,8	10,4	5,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ADVIS COMM ON INTERGOVT RELAT WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01								
02								
03								
04								
05	1			2	1	50,0	- 50,0	-100,0
06	7	5	71,4	7	6	85,7		- 16,7
07	1	1	100,0	7	5	71,4	- 85,7	- 80,0
08	2	2	100,0	1	1	100,0	100,0	100,0
09	4	1	25,0	1	1	100,0	300,0	
10								
11	1			3	2	66,7	- 66,7	-100,0
12	3	1	33,3	2	1	50,0	50,0	
13	2	1	50,0	1			100,0	*
14	1			1				
15	4			4				
16				1			-100,0	
17	2			3			- 33,3	
18	1			1				
ABOVE 18	1			1				
UNGRADED								
TOTAL B/	30	11	36,7	35	17	48,6	- 14,3	- 35,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

AMER BATTLE MONUMENTS COMM WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01				1			-100,0	
02								
03				1			-100,0	
04	3			1	1	100,0	200,0	-100,0
05	4	1	25,0	1	1	100,0	300,0	
06	10	1	10,0	10	1	10,0		
07	7	1	14,3	9	1	11,1	- 22,2	
08	12	1	8,3	11			9,1	*
09	6	1	16,7	7	1	14,3	- 14,3	
10								
11	1			1				
12								
13				2			-100.0	
14								
15								
16								
17								
18								
ABOVE 18								
UNGRADED								
TOTAL B/	43	5	11,6	44	5	11,4	- 2,3	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ARMS CONTROL & DISARM AGENCY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	4			3			33,3	
03	5	4	80,0	6	6	100,0	- 16,7	- 33,3
04	8	7	87,5	9	8	88,9	- 11,1	- 12,5
05	19	16	84,2	22	20	90,9	- 13,6	- 20,0
06	8	8	100,0	9	9	100,0	- 11,1	- 11,1
07	15	14	93,3	18	16	88,9	- 16,7	- 12,5
08	4	4	100,0	3	3	100,0	33,3	33,3
09	16	15	93,8	14	12	85,7	14,3	25,0
10	4	4	100,0	4	4	100,0		
11	8	6	75,0	6	5	83,3	33,3	20,0
12	6	5	83,3	6	6	100,0		- 16,7
13	4			9	1	11,1	- 55,6	-100,0
14	11	1	9,1	11				*
15	28	1	3,6	19			47,4	*
16	3			5			- 40,0	
17	8			11			- 27,3	
18	2			3			- 33,3	
ABOVE 18	8			4			100,0	
UNGRADED								
TOTAL B/	161	85	52,8	162	90	55,6	- ,6	- 5,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES. BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ATOMIC ENERGY COMMISSION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	2	2	100,0	2	2	100,0		
02	36	24	66,7	42	31	73,8	- 14,3	- 22,6
03	115	91	79,1	133	111	83,5	- 13,5	- 18,0
04	349	246	70,5	407	299	73,5	- 14,3	- 17,7
05	890	575	64,6	910	571	62,7	- 2,2	,7
06	632	512	81,0	635	507	79,8	- ,5	
07	499	341	68,3	466	333	71,5	7,1	2,4
08	166	118	71,1	169	114	67,5	- 1,8	3,5
09	393	129	32,8	411	120	29,2	- 4,4	7,5
10	34	8	23,5	30	10	33,3	13,3	- 20,0
11	355	66	18.6	419	74	17,7	- 15,3	- 10,8
12	584	62	10,6	601	65	10,8	- 2,8	- 4,6
13	841	32	3,8	845	34	4,0	- ,5	- 5,9
14	925	11	1,2	919	9		,7	22,2
15	479	5	,7	654	6	,9	3,8	- 16,7
16	227			246			- 7,7	
17	127			107			18,7	
18	47			59			- 20,3	
ABOVE 18	38			12			216,7	
UNGRADED								
TOTAL B/	5,939	2,222	32,0	7,067	2,286	32,3	- 1,8	- 2,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

CANAL ZONE GOVERNMENT — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02				2	2	100,0	-100,0	-100,0
03	13	12	92,3	12	12	100,0	8,3	
04	54	51	94,4	57	50	87,7	- 5,3	2,0
05	80	70	87,5	128	109	85,2	- 37,5	- 35,8
06	74	45	60,8	145	105	72,4	- 48,0	- 57,1
07	232	170	73,3	325	214	65,8	- 28,6	- 20,6
08	165	86	52,1	144	46	31,9	14,6	86,0
09	240	122	50,8	257	118	45,9	- 6,6	3,4
10	133	53	39,8	148	60	40,5	- 10,1	- 11,7
11	226	103	45,6	199	82	41,2	13,6	25,6
12	202	63	31,2	49	5	10,2	312,2	*
13	64	4	6,3	53	4	7,5	20,8	
14	32	5	15,6	20	2	10,0	60,0	150,0
15	13	1	7,7	10	1	10,0	30,0	
16								
17				3			-100,0	
18								
ABOVE 18	4			1			300,0	
UNGRADED								
TOTAL B/	1,532	785	51,2	1,553	810	52,2	- 1,4	- 3,1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

CIVIL AERONAUTICS BOARD — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	1	1	100,0	1	1	100,0		
02	5	5	100,0	3	2	66,7	66,7	150,0
03	10	7	70,0	13	11	84,6	- 23,1	- 36,4
04	24	16	66,7	20	16	80,0	20,0	
05	42	33	78,6	42	31	73,8		6,5
06	65	58	89,2	63	53	84,1	3,2	9,4
07	73	46	63,0	69	45	65,2	5,8	2,2
08	21	20	95,2	15	13	86,7	40,0	53,8
09	44	24	54,5	51	30	58,8	- 13,7	- 20,0
10	3	3	100,0	3	2	66,7		50,0
11	74	22	29,7	61	22	36,1	21,3	
12	64	13	20,3	53	11	20,8	20,8	18,2
13	70	5	7,1	77	6	7,8	- 9,1	- 16,7
14	67	2	2,0	62	2	3,2	8,1	
15	42	2	4,8	41	3	7,3	2,4	- 33,3
16	31			36			- 13,9	
17	16			11			45,5	
18	3			3				
ABOVE 18	5			5				
UNGRADED								
TOTAL B/	660	257	38,9	629	248	39,4	4,9	3,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

CIVIL SERVICE COMMISSION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	41	30	73,2	26	23	88,5	57,7	30,4
02	328	288	87,8	236	205	86,9	38,0	40,5
03	759	689	90,8	711	634	89,2	6,8	8,7
04	745	655	87,9	698	609	87,2	6,7	7,6
05	573	471	82,2	577	486	84,2	- ,7	- 3,1
06	172	161	93,6	140	124	88,6	22,9	29,8
07	299	181	60,5	280	145	51,8	6,8	24,8
08	22	16	72,7	18	15	83,3	22,2	6,7
09	334	142	42,5	350	162	46,3	- 4,6	- 12,3
10	39	19	63,3	25	16	64,0	20,0	18,8
11	773	135	17,5	773	128	16,6		5,5
12	377	73	19,4	341	71	20,8	10,6	2,8
13	384	50	13,0	349	44	12,6	10,0	13,6
14	191	11	5,8	171	10	5,8	11,7	10,0
15	140	5	3,6	124	4	3,2	12,9	25,0
16	30			27	2	7,4	11,1	-100,0
17	14	1	7,1	14	1	7,1		
18	9			6			50.0	
ABOVE 18	4			4				
UNGRADED								
TOTAL B/	5,225	2,927	56,0	4,870	2,679	55,0	7,3	9,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

COMMISSION ON CIVIL RIGHTS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02				1			-100,0	
03	2			2	1	50,0		-100,0
04	15	8	53,3	6	4	66,7	150,0	100,0
05	11	9	81,8	9	8	88,9	22,2	12,5
06	21	20	95,2	25	24	96,0	- 16,0	- 16,7
07	10	8	80,0	15	14	93,3	- 33,3	- 42,9
08	5	5	100,0	1	1	100,0	400,0	400,0
09	7	6	85,7	11	10	90,9	- 36,4	- 40,0
10								
11	15	12	80,0	14	11	78,6	7,1	9,1
12	12	6	50,0	13	5	38,5	- 7,7	20,0
13	22	7	31,8	17	3	17,6	29,4	133,3
14	13	2	15,4	13	3	23,1		- 33,3
15	15	3	20,0	12	2	16,7	25,0	50,0
16	3			2			50,0	
17	2			2				
18	1			1				
ABOVE 18								
UNGRADED								
TOTAL B/	154	86	55,8	144	86	59,7	6,9	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

EQUAL EMPLOY OPPORTUNITY COMM — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	1			4	4	100,0	- 75,0	-100,0
02				12	12	100,0	-100,0	-100,0
03	36	33	91,7	42	40	95,2	- 14,3	- 17,5
04	80	72	90,0	56	53	94,6	42,9	35,8
05	67	57	85,1	52	38	73,1	28,8	50,0
06	33	33	100,0	30	30	100,0	10,0	10,0
07	70	35	50,0	69	27	39,1	1,4	29,6
08	5	4	80,0	5	5	100,0		- 20,0
09	87	31	35,6	51	18	35,3	70,6	72,2
10								
11	154	40	25,0	73	20	27,4	110,0	100,0
12	64	14	21,9	46	14	30,4	39,1	
13	74	15	20,3	46	10	21,7	60,9	50,0
14	39	7	18,4	26	5	19,2	46,2	40,0
15	23	4	17,4	25	7	28,0	- 8,0	- 42,9
16	9			11	1	9,1	- 18,2	-100,0
17	3			3	1	33,3		-100,0
18	1			1				
ABOVE 18	4			4	1	25,0		-100,0
UNGRADED								
TOTAL B/	749	345	46,1	556	286	51,4	34,7	20,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

EXPORT-IMPORT BANK — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01				1			-100,0	
02	7	2	28,6	12	5	41,7	- 41,7	- 60,0
03	7	6	85,7	12	10	83,3	- 41,7	- 40,0
04	33	29	87,9	14	13	92,9	135,7	123,1
05	37	33	89,2	54	49	90,7	- 31,5	- 32,7
06	34	30	88,2	26	26	100,0	30,8	15,4
07	46	32	69,6	33	21	63,6	39,4	52,4
08	15	12	80,0	6	5	83,3	150,0	140,0
09	26	16	61,5	23	15	65,2	13,0	6,7
10	8	6	75,0	6	6	100,0	33,3	
11	17	8	47,1	16	5	31,3	6,3	60,0
12	13	3	23,1	17	3	17,6	- 23,5	
13	24	2	8,3	23	1	4,3	4,3	100,0
14	27	1	3,7	24	2	8,3	12,5	- 50,0
15	41	1	2,4	30			36,7	*
16	8			9			- 11,1	
17	4			4				
18	2			1			100,0	
ABOVE 18	5			5				
UNGRADED								
TOTAL B/	354	181	51,1	316	161	50,9	12,0	12,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FARM CREDIT ADMINISTRATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02								
03	3	1	33,3	4	2	50.0	- 25,0	- 50,0
04	13	13	100,0	10	10	100,0	30,0	30,0
05	24	23	95,8	22	20	90,9	9,1	15,0
06	16	13	81,3	17	15	88,2	- 5,9	- 13,3
07	24	18	75,0	20	16	80,0	20,0	12,5
08	1	1	100,0				*	*
09	7	4	57,1	11	5	45,5	- 36,4	- 20,0
10	1			1				
11	23	3	13,0	26	5	19,2	- 11,5	- 40,0
12	20	2	10,0	22	1	4.5	- 9,1	100,0
13	34	2	5,9	31	2	6.5	9,7	
14	26			26				
15	11			10			10,0	
16	4			4				
17	4			3			33,3	
18	1			1				
ABOVE 18	1			1				
UNGRADED								
TOTAL B/	219	80	37,6	209	76	36,4	1,9	5,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FEDERAL COMMUNICATIONS COMM WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	5			2	2	100,0	150,0	*100,0
02	27	20	74,1	20	17	85,0	35,0	17,6
03	67	60	89,6	57	46	80,7	17,5	30,4
04	101	78	77,2	123	105	85,4	- 17,9	- 25,7
05	171	144	84,2	168	138	82,1	1,8	4,3
06	99	82	83,7	108	88	81,5	- 9,3	- 6,8
07	159	94	62,7	152	87	57,2	- 1,3	8,0
08	35	28	80,0	24	19	79,2	45,8	47,4
09	113	27	23,9	87	25	28,7	29,9	8,0
10	5			7	1	14,3	- 28,6	*100,0
11	145	32	22,1	172	31	18,0	- 15,7	3,2
12	144	11	7,6	146	12	8,2	- 1,4	- 8,3
13	154	4	2,6	144	4	2,8	8,3	
14	111	2	1,8	109	5	4,6	1,8	- 60,0
15	108	4	3,7	95	4	4,2	13,7	
16	32	1	3,1	32				*
17	12			13	1	7,7	- 7,7	*100,0
18	5	1	20,0	4			25,0	*
ABOVE 18	4			7			- 14,3	
UNGRADED								
TOTAL B/	1,491	588	39,4	1,470	585	39,8	1,4	,5

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FED DEPOSIT INSURANCE CORP — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	4	3	75,0	2	1	50,0	100,0	200,0
02	32	25	78,1	41	31	75,6	- 21,0	- 19,4
03	92	84	91,3	98	90	91,8	- 6,1	- 6,7
04	141	115	81,6	145	122	84,1	- 2,8	- 5,7
05	103	80	77,7	111	85	76,6	- 7,2	- 5,9
06	256	85	33,2	271	79	29,2	- 5,5	7,6
07	412	88	21,4	308	74	24,0	33,8	18,9
08	26	20	76,9	24	21	87,5	8,3	- 4,8
09	440	54	12,3	379	41	10,8	16,1	31,7
10	5	3	60,0	7	4	57,1	- 28,6	- 25,0
11	201	12	5,0	169	9	5,3	18,9	33,3
12	258	5	1,9	244	4	1,6	5,7	25,0
13	174	1	,6	167	2	1,2	4,2	- 50,0
14	120	1	,8	108	1	,9	11,1	
15	56	2	3,6	47	2	4,3	19,1	
16	19			26	1	3,8	- 26,9	-100,0
17	13			6			116,7	
18	10			10				
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	2,364	578	24,5	2,165	567	26,2	9,2	1,9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FEDERAL HOME LOAN BANK BOARD WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01				1	1	100,0	-100,0	-100,0
02	13	12	92,3	13	11	84,6		9,1
03	42	34	80,0	42	40	95,2		- 15,0
04	91	84	92,3	79	72	91,1	15,2	16,7
05	90	79	87,8	81	71	87,7	11,1	11,3
06	52	52	100,0	48	46	95,8	8,3	13,0
07	59	45	76,3	46	34	73,9	28,3	32,4
08	14	12	85,7	19	17	89,5	- 26,3	- 29,4
09	89	18	20,2	104	17	16,3	- 14,4	5,9
10	4	4	100,0	4	4	100,0		
11	211	11	5,2	229	9	3,9	- 7,9	22,2
12	232	9	3,9	226	4	1,8	2,7	125,0
13	170	3	1,8	163	3	1,8	4,3	
14	72			74			- 2,7	
15	57	1	1,8	54			5,6	*
16	7			6			16,7	
17	1			3			- 66,7	
18	2			2				
ABOVE 18	3			3				
UNGRADED								
TOTAL B/	1,209	364	30,1	1,197	329	27,5	1,0	10,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FEDERAL MARITIME COMMISSION WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	2						*	
02	3	3	100,0	3	2	66,7		50,0
03	4	3	75,0	4	2	50,0		50,0
04	6	6	100,0	11	6	54,5	- 45,5	
05	23	16	69,6	16	15	93,8	43,8	6,7
06	15	14	93,3	21	19	90,5	- 28,6	- 26,3
07	20	18	90,0	20	18	90,0		
08	8	7	87,5	8	7	87,5		
09	6	2	33,3	11	4	36,4	- 45,5	- 50,0
10	5	5	100,0	4	4	100,0	25,0	25,0
11	17	6	35,3	16	4	25,0	6,3	50,0
12	29	3	10,3	29	2	6,9		50,0
13	23	1	4,3	21	2	9,5	9,5	- 50,0
14	21	1	4,8	21				*
15	14			17			- 17,6	
16	16			16				
17	3			2			50,0	
18								
ABOVE 18	5	1	20,0	5	1	20,0		
UNGRADED								
TOTAL B/	220	86	39,1	225	86	38,2	- 2,2	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FED MEDIATN & CONCILATN SERV WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	1						*	
02	2	2	100,0				*	*
03	7	5	71,4	4	2	50,0	75,0	150,0
04	25	23	92,0	27	24	88,9	- 7,4	- 4,2
05	55	48	87,3	59	55	93,2	- 6,8	- 12,7
06	22	18	81,8	15	13	86,7	46,7	38,5
07	9	8	88,9	12	11	91,7	- 25,0	- 27,3
08	2	2	100,0	2	2	100,0		
09	16	11	68,8	13	8	61,5	23,1	37,5
10	1			1				
11	4	2	50,0	7	5	71,4	- 42,9	- 60,0
12	19	2	10,5	9	1	11,1	111,1	100,0
13	58	1	1,7	84			- 30,0	*
14	186			174	1	,6	6,9	*100,0
15	16			16				
16	9			8			12,5	
17	1			1				
18								
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	435	122	28,0	434	122	28,1	,2	

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FEDERAL POWER COMMISSION WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	2	1	50,0	4	2	50,0	- 50,0	- 50,0
02	7	2	28,6	13	7	53,8	- 46,2	- 71,4
03	17	11	64,7	20	15	75,0	- 15,0	- 26,7
04	58	46	79,3	58	45	77,6		2,2
05	81	54	66,7	91	63	69,2	- 10,0	- 14,3
06	85	76	89,4	85	78	91,8		- 2,6
07	97	66	68,0	92	60	65,2	5,4	10,0
08	15	11	73,3	16	11	68,8	- 6,3	
09	66	25	37,9	70	28	40,0	- 5,7	- 10,7
10	5	5	100,0	5	5	100,0		
11	89	18	20,2	92	17	18,5	- 3,3	5,9
12	142	8	5,6	148	7	4,7	- 4,1	14,3
13	134	4	2,0	125	6	4,8	7,2	- 33,3
14	118	2	1,7	116	2	1,7	1,7	
15	82	1	1,2	81	1	1,2	1,2	
16	36			34			5,9	
17	5			4			25,0	
18	5			5				
ABOVE 18	5			5				
UNGRADED								
TOTAL B/	1,049	330	31,5	1,064	347	32,6	- 1,4	- 4,9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FEDERAL TRADE COMMISSION WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	3			10	3	30,0	- 70,0	-100,0
02	25	18	69,2	43	33	76,7	- 39,5	- 45,5
03	94	77	81,9	76	64	84,2	23,7	20,3
04	114	101	88,6	109	98	89,9	4,6	3,1
05	166	156	93,0	129	120	93,0	28,7	30,0
06	64	58	90,6	62	57	91,9	3,2	1,8
07	107	82	76,6	84	75	89,3	27,4	9,3
08	29	17	85,0	13	12	92,3	53,8	41,7
09	54	27	50,0	43	14	32,6	25,6	92,9
10	3	3	100,0	1	1	100,0	200,0	200,0
11	115	18	15,7	153	18	11,8	- 24,8	
12	144	22	15,1	98	12	12,2	48,0	83,3
13	107	9	8,3	98	8	8,2	11,2	12,5
14	117	5	4,5	116	3	2,6	- 3,4	66,7
15	152	2	1,3	158	2	1,3	- 3,8	
16	25	1	4,0	25	1	4,0		
17	9			5			- 60,0	
18	2			2				
ABOVE 18	5	1	20,0	5	1	20,0		
UNGRADED								
TOTAL B/	1,319	597	45,3	1,230	522	42,4	7,2	14,4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

FOREIGN CLAIMS SETTLEMENT COMM WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02				1			-100,0	
03	1						*	
04	1			2	1	50,0	- 50,0	-100,0
05	9	9	100,0	2	2	100,0	350,0	350,0
06	1	1	100,0	8	7	87,5	- 87,5	- 85,7
07	2	1	50,0	2	2	100,0		- 50,0
08	3	2	66,7				*	*
09	1	1	100,0	3	3	100,0	- 66,7	- 66,7
10								
11				2	1	50,0	-100,0	-100,0
12								
13	1			4			- 75,0	
14	1			7			- 85,7	
15	1			3	1	33,3	- 66,7	-100,0
16	10	1	10,0	1			900,0	*
17								
18								
ABOVE 18	2			2				
UNGRADED								
TOTAL B/	33	15	45,5	37	17	45,9	- 10,8	- 11,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

GENERAL SERVICES ADMIN — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	53	32	60,4	32	16	50,0	65,6	100,0
02	295	251	85,1	322	278	86,3	- 8,4	- 9,7
03	2,353	1,199	50,0	2,465	1,350	54,8	- 4,5	- 11,2
04	3,275	1,750	53,4	3,467	1,981	57,1	- 5,5	- 11,7
05	3,104	1,642	52,9	3,122	1,662	53,2	- ,6	- 1,2
06	933	595	63,4	924	592	64,1	1,5	,5
07	1,459	751	51,8	1,422	713	50,1	1,0	3,3
08	181	77	42,5	156	57	36,5	16,0	35,1
09	1,287	431	33,5	1,293	374	28,9	- ,5	15,2
10	62	4	6,5	52	2	3,8	19,2	100,0
11	1,759	247	14,0	1,681	205	12,2	4,6	20,5
12	1,595	122	7,6	1,475	98	6,6	8,1	24,5
13	1,167	58	4,0	1,064	38	3,6	9,7	52,6
14	584	17	2,9	554	14	2,5	5,4	21,4
15	325	4	1,2	312	2	,6	4,2	100,0
16	38	1	2,6	37			2,7	*
17	24			23			13,0	
18	5			5				
ABOVE 18	8			8				
UNGRADED								
TOTAL B/	19,509	7,181	38,8	18,414	7,382	40,1	,5	- 2,7

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

U. S. INFORMATION AGENCY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT - 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	2			3	1	33,3	- 33,3	-100,0
02	72	62	86,1	99	70	70,7	- 27,3	- 11,4
03	113	92	81,4	123	109	88,6	- 8,1	- 15,6
04	137	119	86,9	130	105	80,8	5,4	13,3
05	199	145	73,2	236	182	77,1	- 16,1	- 20,3
06	198	160	80,8	204	159	77,9	- 2,9	,6
07	287	228	79,4	307	226	73,6	- 6,5	,9
08	67	56	83,6	61	52	85,2	9,8	7,7
09	341	166	48,7	404	189	46,8	- 15,6	- 12,2
10	217	54	24,9	209	47	22,5	3,8	14,9
11	309	118	38,4	333	118	35,4	- 9,3	- 1,7
12	515	105	20.4	495	101	20,4	4,0	3,0
13	702	86	12,3	750	92	12,3	- 6,4	- 6,5
14	615	40	6,5	649	41	6,3	- 5,2	- 2,4
15	83	1	1,2	89	1	1,1	- 6,7	
16	182	4	2,2	203	3	1,5	- 10,3	33,3
17	54	3	5,6	50	4	8,0	8,0	- 25,0
18	6			6				
ABOVE 18	2			4			- 50,0	
UNGRADED								
TOTAL B/	4,093	1,437	35,1	4,355	1,500	34,4	- 6,0	- 4,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

INTERSTATE COMMERCE COM — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	2			5	2	40,0	- 60,0	-100,0
02	46	35	76,1	36	20	55,6	27,8	75,0
03	93	69	74,2	99	82	82,8	- 6,1	- 15,9
04	150	113	75,3	187	149	79,7	- 19,8	- 24,2
05	237	210	88,6	248	220	89,4	- 3,7	- 4,5
06	102	91	89,2	90	81	90,0	13,3	12,3
07	79	54	68,4	85	62	72,9	- 7,1	- 12,9
08	34	27	79,4	28	19	67,9	21,4	42,1
09	129	33	25,6	137	30	21,9	- 5,8	10,0
10	43	5	11,6	43	4	9,3		25,0
11	127	29	22,8	128	31	24,2	- ,8	- 6,5
12	269	8	3,0	283	14	4,9	- 7,1	- 42,9
13	107	4	3,7	107	3	2,8		33,3
14	81	2	2,5	97	2	2,3	- 6,9	
15	101	4	3,0	97	3	3,1	4,1	33,3
16	88	1	1,1	114	1	,9	- 22,8	
17	7			10			- 30,0	
18	1			3			- 66,7	
ABOVE 18	11	1	9,1	10	1	10,0	10,0	
UNGRADED								
TOTAL B/	1,701	686	40,3	1,795	724	40,3	- 5,2	- 5,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES. SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NAT AERONAUTICS & SPACE ADMIN — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	--- WOMEN --- NUMBER	--- WOMEN --- %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	--- WOMEN --- NUMBER	--- WOMEN --- %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	13	7	53,8	11	2	18,2	18,2	250,0
02	76	48	63,2	159	134	84,3	- 52,2	- 64,2
03	406	324	79,8	571	419	73,4	- 28,9	- 22,7
04	1,077	870	80,8	1,330	1,107	83,2	- 19,0	- 21,4
05	1,849	1,569	84,9	1,939	1,670	86,1	- 4,6	- 6,0
06	813	708	87,1	797	726	91,1	2,0	- 2,5
07	1,131	548	48,5	1,325	594	44,8	- 14,6	- 7,7
08	515	114	22,1	474	99	20,9	8,6	15,2
09	2,197	344	15,7	2,259	380	16,8	- 2,7	- 9,5
10	368	16	4,4	341	21	6,2	7,0	- 23,8
11	3,279	268	8,2	3,442	281	8,2	- 4,7	- 4,6
12	4,289	200	4,7	4,419	171	3,9	- 2,9	16,0
13	5,575	88	1,6	5,432	79	1,5	2,6	11,4
14	3,405	27	,8	3,538	32	,9	- 3,8	- 15,6
15	2,115	4	,2	2,165	5	,2	- 2,3	- 20,0
16	358	2	,6	439			- 18,5	-
17	164	1	,6	218	1	,5	- 24,8	
18	53			42			26,2	
ABOVE 18	119			7			-	
UNGRADED								
TOTAL B/	27,799	5,138	18,5	28,908	5,721	19,8	- 3,8	- 10,2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES. SPECIFICALLY, IN MOST INSTANCES, BY CUMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NAT CAPITAL PLANNING COMM — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01								
02								
03	1						•	
04				1	1	100,0	•100,0	•100,0
05	6	6	100,0	17	16	94,1	• 64,7	• 62,5
06	7	6	85,7				•	•
07	7	4	57,1	8	5	62,5	• 12,5	• 20,0
08	2	2	100,0	2	2	100,0		
09	1			2			• 50,0	
10	2			1			100,0	
11	5	1	20,0	6	1	16,7	• 16,7	
12	9	2	22,2	9	2	22,2		
13	4			5	1	20,0	• 20,0	•100,0
14	5	1	20,0	4	1	25,0	25,0	
15	3			8				
16	3			2				
17	1			1				
18								
ABOVE 18								
UNGRADED								
TOTAL B/	60	22	36,7	66	29	43,9	• 9,1	• 24,1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NAT FOUNDTN OF ARTS & HUMAN — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01								
02	3	1	33,3				*	*
03	5	4	66,7	2			200,0	*
04	1	1	100,0	5	5	100,0	- 80,0	- 80,0
05	11	10	100,0	5	5	100,0	120,0	120,0
06	4	3	75,0	4	4	100,0		- 25,0
07	19	18	94,7	16	15	93,8	18,8	20,0
08	8	8	100,0	5	5	100,0	60,0	60,0
09	9	8	88,9	5	5	100,0	80,0	60,0
10								
11	9	8	88,9	5	4	80,0	80,0	100,0
12	2	2	100,0	2	2	100,0		
13	4	3	75,0	4	2	50,0		50,0
14	11	5	50,0	8	4	50,0	25,0	25,0
15	13	2	15,4	8	2	25,0	62,5	
16	3			2			50,0	
17								
18	2			2				
ABOVE 18	1	1	100,0	2	1	50,0	- 50,0	
UNGRADED								
TOTAL B/	104	74	71,2	75	54	72,0	38,7	37,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NAT LABOR RELATIONS BOARD — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	9	2	66.7				*	*
02	11	7	63.6	17	9	52.9	- 35.3	- 22.2
03	72	62	86.1	64	54	84.4	12.5	14.8
04	152	144	94.7	193	188	97.4	- 21.2	- 23.4
05	311	293	94.2	311	290	93.2		1.0
06	134	128	95.5	125	119	95.2	7.2	7.6
07	89	70	78.7	84	66	78.6	5.0	6.1
08	16	14	87.5	14	13	92.9	14.3	7.7
09	74	46	62.2	76	47	61.8	- 2.6	- 2.1
10	8	8	100.0	7	7	100.0	14.3	14.3
11	90	19	21.1	197	28	14.2	- 54.3	- 32.1
12	230	23	10.0	257	31	12.1	- 10.5	- 25.8
13	409	23	5.6	337	24	7.1	18.7	- 4.2
14	247	17	6.9	245	17	6.9	.8	
15	97	4	4.1	111	4	3.6	- 12.6	
16	135	4	2.0	123	3	2.4	9.8	33.3
17	7			3				
18	2			2				
ABOVE 18	5			6			- 16.7	
UNGRADED								
TOTAL B/	2,279	864	41.6	2,172	900	41.4	- 4.3	- 4.0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES. SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP OF RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NATIONAL MEDIATION BOARD — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01				2	1	50,0	-100,0	-100,0
02								
03								
04	1			2	1	50,0	- 50,0	-100,0
05	4	3	75,0	6	5	83,3	- 33,3	- 40,0
06	1	1	100,0	3	3	100,0	- 66,7	- 66,7
07	38	36	94,7	38	36	94,7		
08								
09	9	7	77,8	8	6	75,0	12,5	16,7
10								
11								
12	9	2	22,2	10	2	20,0	- 10,0	
13	6			5			20,0	
14	9			9				
15	3			3				
16								
17	1			1				
18								
ABOVE 18	2			3			- 33,3	
UNGRADED								
TOTAL B/	83	49	59,0	90	54	60,0	- 7,8	- 9,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

NATIONAL SCIENCE FOUNDATION WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	11	11	100,0	1			*	*
02	2			7	5	71,4	- 71,4	-100,0
03	13	10	100,0	13	12	92,3	- 23,1	- 16,7
04	34	27	79,4	39	33	84,6	- 12,8	- 18,2
05	86	74	86,0	97	89	91,8	- 11,3	- 16,9
06	134	129	96,3	127	12.	95,3	5,5	6,6
07	92	85	92,4	83	71	85,5	10,8	19,7
08	30	26	86,7	22	19	86,4	36,4	36,8
09	54	43	79,6	51	37	72,5	5,9	16,2
10	4	3	75,0	2	1	50,0	100,0	200,0
11	37	23	62,2	44	23	52,3	- 15,9	
12	56	25	44,6	52	22	42,3	7,7	13,6
13	68	14	20,6	73	13	17,8	- 6,8	7,7
14	105	12	11,4	91	9	9,9	15,4	33,3
15	132	8	6,1	126	7	5,6	4,8	14,3
16	60	1	1,7	51			17,6	*
17	32			21			52,4	
18	10			10				
ABOVE 18	6			1			500,0	
UNGRADED								
TOTAL B/	963	491	50,0	911	462	50,7	5,7	6,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

PANAMA CANAL COMPANY WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	2			2	1	50,0		-100,0
02	5	4	80,0	4	3	75,0	25,0	33,3
03	33	17	51,5	30	14	46,7	10,0	21,4
04	94	38	40,4	87	34	39,1	8,0	11,8
05	97	61	62,9	114	72	63,2	- 14,9	- 15,3
06	76	54	71,1	72	57	79,2	5,6	- 5,3
07	92	45	48,9	97	47	48,5	- 5,2	- 4,3
08	36	7	19,4	41	12	29,3	- 12,2	- 41,7
09	103	34	33,0	91	25	27,5	13,2	36,0
10	42	1	2,4	43	3	6,0	- 2,3	- 66,7
11	143	12	8,4	145	10	6,9	- 1,4	20,0
12	141	3	2,1	138	3	2,2	2,2	
13	59	2	3,4	58	2	3,4	1,7	
14	30			30				
15	8			8				
16								
17	1			6			- 83,3	
18								
ABOVE 18	7			2			250,0	
UNGRADED								
TOTAL B/	969	278	28,7	968	283	29,2	,1	- 1,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

PUBLIC LAND LAW REVIEW COMM — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02								
03				2	1	50,0	-100,0	-100,0
04								
05				1			-100,0	
06	1	1	100,0	3	3	100,0	- 66,7	- 66,7
07	1	1	100,0	3	2	66,7	- 66,7	- 50,0
08	1	1	100,0				*	*
09				4	4	100,0	-100,0	-100,0
10				2	2	100,0	-100,0	-100,0
11				1			-100,0	
12	2	2	100,0	2	2	100,0		
13				2			-100,0	
14	1			7			- 85,7	
15				4			-100,0	
16				4			-100,0	
17	1			3			- 66,7	
18				1			-100,0	
ABOVE 18	1			1				
UNGRADED								
TOTAL B/	8	5	62,5	40	14	35,0	- 80,0	- 64,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

RAILROAD RETIREMENT BOARD — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	8	8	100.0	2	2	100,0	300,0	300,0
02	115	92	80,0	91	77	84,6	26,4	19,5
03	169	144	85,2	177	154	87,0	- 4,5	- 6,5
04	196	180	91,8	195	173	88,7	,5	4,0
05	214	174	80,6	238	200	84,0	- 9,2	- 13,0
06	39	31	79,5	40	30	75,0	- 2,5	3,3
07	194	135	69,6	208	127	61,1	- 6,7	6,3
08	120	71	59,2	58	36	62,1	106,9	97,2
09	89	44	49,4	95	50	52,6	- 6,3	- 12,0
10	217	42	19,4	222	38	17,1	- 2,3	10,5
11	131	22	16,8	140	20	14,3	- 6,4	10,0
12	109	16	14,7	108	16	14,8	,9	
13	36	3	8,3	35	2	5,7	2,9	50,0
14	29			28			3,6	
15	27			28			- 3,6	
16	4			4				
17	4			4				
18	1			1				
ABOVE 18	2			3			- 33,3	
UNGRADED								
TOTAL B/	1,706	962	56,4	1,677	925	55,2	1,7	4,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

RENEGOTIATION BOARD — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01								
02	7	7	100,0	7	7	100,0		
03	14	12	85,7	9	8	88,9	55,6	50,0
04	18	15	83,3	16	12	75,0	12,5	25,0
05	10	9	90,0	8	7	87,5	25,0	28,6
06	22	20	90,9	22	20	90,9		
07	13	13	100,0	17	15	88,2	- 23,5	- 13,3
08								
09	16	14	87,5	12	10	83,3	33,3	40,0
10								
11	7	3	42,9	8	3	37,5	- 12,5	
12	5			3			66,7	
13	15			21			- 28,6	
14	67			50	1	2,0	34,0	-100,0
15	29			28			3,6	
16	5			5				
17	2			2				
18				1			-100,0	
ABOVE 18	4			5			20,0	
UNGRADED								
TOTAL B/	236	93	39,4	214	83	38,8	10,3	12,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SECURITIES AND EXCHANGE COMM — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01								
02	14	8	57,1	32	24	75,0	- 56,3	- 66,7
03	59	46	77,0	70	58	82,9	- 15,7	- 20,7
04	88	73	82,0	86	77	89,5	2,3	- 5,2
05	128	107	83,6	132	104	78,8	- 3,0	2,9
06	118	102	86.4	94	80	85,1	25,5	27,5
07	59	33	56.9	75	41	54,7	- 22,7	- 19,5
08	22	16	72,7	15	13	86,7	46,7	23,1
09	57	22	38,6	45	18	40,0	26,7	22,2
10	7	7	100,0	4	4	100,0	75,0	75,0
11	112	14	12,5	146	15	10,3	- 23,3	- 6,7
12	241	10	4,1	206	16	7,8	16,0	- 37,5
13	253	14	5,5	199	10	5,0	27,1	40,0
14	126	9	7,1	119	7	5,9	5,9	28,6
15	60			65			- 7,7	
16	26			26				
17	4			5			- 20,0	
18	6			6				
ABOVE 18	5			4			25,0	
UNGRADED								
TOTAL B/	1,384	461	33,3	1,329	467	35,1	4,1	- 1,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SELECTIVE SERVICE SYSTEM WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01								
02	47	39	82.0	905	876	96,8	- 94,8	- 95,5
03	1,310	1,254	95,7	1,616	1,555	96,2	- 18,9	- 19,4
04	1,504	1,434	95,3	1,833	1,771	96,6	- 17,9	- 19,0
05	1,860	1,809	97,3	964	927	96,2	92,9	95,1
06	926	887	95,8	647	614	94,9	43,1	44,5
07	541	496	91,7	258	217	84,1	109,7	128,6
08	194	165	85,1	139	108	77,7	39,6	52,8
09	117	75	64,1	81	43	53,1	44,4	74,4
10	25	18	72,0	19	12	63,2	31,6	50,0
11	19	6	31,6	11	4	36,4	72,7	50,0
12	17	3	17,6	15	2	13,3	13,3	50,0
13	24	6	25,0	20	4	20,0	20,0	50,0
14	21			11	1	9,1	90,9	-100,0
15	21			17			23,5	
16	2			1			100,0	
17	2			1			100,0	
18	1						*	
ABOVE 18	1						*	
UNGRADED								
TOTAL B/	6,632	6,192	93,4	6,538	6,134	93,8	1,4	,9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SMALL BUSINESS ADMINISTRATION WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	3	1	33.3	4	1	25,0	- 25,0	
02	149	127	85,2	27	18	66,7	451.9	605,6
03	285	251	88,1	230	205	89,1	23,9	22,4
04	555	489	88,1	620	568	91,6	- 10,5	- 13,9
05	501	438	87,4	518	465	89,8	- 3,3	- 5,8
06	306	285	93,1	299	284	94,0	2,3	,4
07	211	143	67,8	173	138	79,8	21,0	3,6
08	44	42	95,5	43	39	90,7	2,3	7,7
09	169	64	37,9	175	65	37,1	- 3,4	- 1,5
10	3			4	1	25,0	- 25,0	-100,0
11	471	52	11,0	473	52	10,0	- ,4	
12	818	33	4,0	792	37	4,7	3,3	- 10,8
13	462	26	5,6	443	19	4,3	4,3	36,8
14	217	10	4,6	229	13	5,7	- 5,2	- 23,1
15	166	5	3,0	138	3	2,2	20,3	66,7
16	19			20			- 5,0	
17	6			9			- 33,3	
18	4			4				
ABOVE 18	5			4			25,0	
UNGRADED								
TOTAL B/	4,394	1,966	44,7	4,205	1,908	45,4	4,5	3,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SMITHSONIAN INSTITUTION (INCL. NATL. GALLERY OF ART) WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	1						*	
02	11	6	54,5	11	8	72,7		- 25,0
03	78	19	24,4	100	13	13,0	- 22,0	46,2
04	303	57	18,5	305	45	14,8		26,7
05	219	108	51,4	203	108	53,2	3,4	
06	121	84	69,4	112	72	64,3	8,0	16,7
07	183	96	52,5	180	79	43,9	1,7	21,5
08	39	32	84,2	34	27	79,4	11,8	18,5
09	229	66	30,0	222	73	32,9	- ,9	- 9,6
10	5	1	20,0	4	1	25,0	25,0	
11	169	49	30,6	149	49	32,9	7,4	
12	139	25	17,0	111	22	19,8	25,2	13,6
13	97	14	14,4	94	10	10,6	3,2	40,0
14	119	9	8,2	105	7	6,7	4,8	28,6
15	73	3	4,1	68	4	5,9	7,4	- 25,0
16	15			15			6,7	
17	14			12			16,7	
18				2			-100,0	
ABOVE 18	6			3			100,0	
UNGRADED								
TOTAL B/	1,799	569	31,8	1,730	518	29,9	3,5	9,8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

U. S. SOLDIER'S HOME — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	116	4	3,4	114	10	8,8	1,8	- 60,0
02	11	7	63,6	7	3	42,9	57,1	133,3
03	156	74	47,4	165	60	36,4	- 5,5	23,3
04	59	28	48,3	61	32	52,5	- 4,9	- 12,5
05	48	20	41,7	39	13	33,3	23,1	53,8
06	21	9	42,9	19	9	47,4	10,5	
07	35	27	77,1	41	33	80,5	- 14,6	- 18,2
08	9	8	88,9	5	3	60,0	80,0	166,7
09	19	8	42,1	20	9	45,0	- 5,0	- 11,1
10	6	3	50,0	4	2	50,0	50,0	50,0
11	6	1	16,7	6				*
12	6			8			- 25,0	
13	3			3				
14	3			1			200,0	
15	2			2				
16	1			1				
17								
18								
ABOVE 18								
UNGRADED								
TOTAL B/	500	189	37,8	496	174	35,1	,8	8,6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

U. S. TARIFF COMMISSION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	1	1	100,0				*	*
02								
03	1			3	2	66,7	- 66,7	-100,0
04	5	5	100,0	6	6	100,0	- 16,7	- 16,7
05	14	10	71,4	19	14	73,7	- 26,3	- 28,6
06	14	13	92,9	19	18	94,7	- 26,3	- 27,8
07	32	26	81,3	29	20	68,8	10,3	30,0
08	5	5	100,0	5	5	100,0		
09	10	8	80,0	13	9	69,2	- 23,1	- 11,1
10	6	6	100,0	6	6	100,0		
11	11	5	38,5	11	5	45,5	18,2	
12	15	4	26,7	18	5	27,8	- 16,7	- 20,0
13	44	2	4,5	46	2	4,3	- 4,3	
14	28	2	7,1	24	1	4,2	16,7	100,0
15	16	1	6,3	16	3	18,8		- 66,7
16	1			1				
17	4			4				
18								
ABOVE 18	4			6	1	16,7	- 33,3	-100,0
UNGRADED								
TOTAL B/	213	88	41,3	226	97	42,9	- 5,8	- 9,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

TAX COURT OF THE U S — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	---- WOMEN ---- NUMBER	%	EMPLOYMENT 31 OCTOBER 1969 TOTAL	---- WOMEN ---- NUMBER	%	PERCENT CHANGE TOTAL	WOMEN
01								
02	2			4	1	25.0	- 50.0	-100.0
03	2			3			- 33.3	
04	6	3	50.0	5	2	40.0	20.0	50.0
05	13	11	84.6	14	12	85.7	- 7.1	- 8.3
06	3	2	66.7	2	2	100.0	50.0	
07	8	7	87.5	9	8	88.9	- 11.1	- 12.5
08	21	18	85.7	18	15	83.3	16.7	20.0
09	28	25	89.3	31	26	83.9	- 9.7	- 3.8
10	1	1	100.0	1	1	100.0		
11	9	1	11.1	11	1	9.1	18.2	
12	18	2	11.1	20	1	5.0	- 10.0	100.0
13	12	2	16.6	8	2	25.0	50.0	
14	3			4			- 25.0	
15	1			2			- 50.0	
16	3			4			- 25.0	
17								
18								
ABOVE 18	25	2	4.0	21	2	9.5	19.1	
UNGRADED								
TOTAL B/	155	74	47.7	157	73	46.5	1.3	1.4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

TENNESSEE VALLEY AUTHORITY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02	31	17	54,8	33	19	57,6	- 6,1	- 10,5
03	405	249	61,5	393	258	65,6	3,1	- 3,5
04	1,349	742	55,0	1,229	674	54,8	9,8	10,1
05	735	303	41,2	697	288	41,3	5,5	5,2
06	507	108	21,3	461	97	21,0	9,0	11,3
07	409	68	16,6	517	105	20,3	- 20,9	- 35,2
08	569	102	17,9	59	6	10,2	864,4	*
09	414	52	12,6	628	87	13,9	- 34,1	- 40,2
10	743	50	6,7	615	42	6,8	20,8	19,0
11	762	35	4,6	719	36	5,0	5,0	- 2,8
12	1,032	19	1,8	961	14	1,5	7,4	35,7
13	672	2	,3	623	2	,3	7,9	
14	247			226	1	,4	9,3	-100,0
15	140	1	,7	138			1,4	*
16	27			26			3,8	
17	36			33			9,1	
18	1						*	
ABOVE 18	3			4			- 25,0	
UNGRADED								
TOTAL B/	8,282	1,748	21,6	7,362	1,629	22,1	9,8	7,3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

VETERANS ADMINISTRATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	268	202	75,4	336	244	72,6	- 20,2	- 17,2
02	2,773	1,917	69,1	3,146	2,205	70,1	- 11,9	- 13,1
03	15,007	8,999	56,2	17,830	9,566	53,7	- 10,2	- 5,9
04	25,109	15,286	58,5	25,234	14,745	58,4	3,5	3,7
05	15,827	9,719	61,4	14,585	8,754	60,0	8,5	11,0
06	7,089	3,931	55,5	5,857	3,202	54,7	21,0	22,8
07	7,685	4,732	61,6	7,692	4,716	61,3	- ,1	,3
08	2,829	1,050	37,1	3,197	1,120	35,0	- 11,5	- 6,3
09	15,062	11,247	74,7	13,980	10,559	75,5	7,7	6,5
10	1,600	578	36,1	1,476	428	28,0	8,4	35,0
11	7,020	3,199	45,6	6,744	3,012	44,7	4,1	6,2
12	5,318	1,320	24,8	5,217	1,273	24,4	1,9	3,7
13	3,337	408	12,2	3,154	386	12,2	5,8	5,7
14	2,238	240	10,7	2,360	224	9,5	- 5,2	7,1
15	4,096	241	5,9	3,976	204	5,1	3,0	18,1
16	300	11	3,7	295	7	2,4	1,7	57,1
17	126	2	1,6	85	2	2,4	48,2	
18	4			7			- 42,9	
ABOVE 18	63	1	1,6	7			800,0	*
UNGRADED								
TOTAL B/	117,750	63,083	53,6	115,178	60,647	52,7	2,2	4,0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

OTHER AGENCIES — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	1	1	100.0	1	1	100.0		
02	8	7	87.5	2	1	50.0	300.0	600.0
03	16	11	68.8	8	6	75.0	100.0	83.3
04	32	21	65.6	9	6	66.7	255.6	250.0
05	71	52	73.2	27	18	66.7	162.9	188.9
06	41	36	87.8	17	16	94.1	141.2	125.0
07	88	67	76.1	46	45	97.8	91.3	48.9
08	39	37	94.9	17	16	94.1	129.4	131.2
09	100	58	58.0	56	49	87.5	78.6	18.4
10	15	13	86.7	11	11	100.0	36.4	18.2
11	216	23	10.6	21	14	66.7	928.6	64.3
12	89	19	21.3	15	9	60.0	493.3	111.1
13	43	4	9.3	20	4	20.0	115.0	
14	49	3	6.1	32	7	21.9	53.1	- 57.1
15	85	6	7.0	58	3	5.2	46.6	100.0
16	25	1	4.0	9			177.8	*
17	27			17			58.8	
18	23			14			64.3	
ABOVE 18	36	1	2.8	22	1	4.5	63.7	
UNGRADED								
TOTAL B/	1,004	360	35.9	402	207	51.5	149.7	73.9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATE, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4th STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

MISCELLANEOUS OCCUPATIONS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	-- WOMEN ---- NUMBER	%	TOTAL	---- WOMEN ---- NUMBER	%	TOTAL	WOMEN
01	32	1	3.1	28	1	3.6	14.3	
02	117	28	23.9	150	15	10.0	- 22.0	86.7
03	2,792	171	6.1	2,982	283	9.5	- 6.4	- 39.6
04	12,571	388	3.1	11,203	148	1.3	12.2	162.2
05	7,707	238	3.1	9,027	283	3.1	- 14.6	- 15.9
06	4,148	222	5.4	3,734	168	4.5	11.1	32.1
07	4,833	322	6.7	4,604	320	6.0	4.0	.6
08	1,730	45	2.6	1,757	40	2.3	- 1.5	12.5
09	2,142	167	7.8	2,236	173	7.7	4.2	- 3.5
10	593	9	1.5	517	11	2.1	14.5	- 18.2
11	2,020	121	5.0	1,937	121	6.2	4.3	
12	1,840	40	2.2	1,763	39	2.2	4.4	2.6
13	913	18	1.0	824	21	2.5	10.8	- 14.3
14	445	3	.7	395	4	1.0	12.7	- 25.0
15	178	1	.6	144	3	2.1	23.6	- 66.7
16	50			52			3.8	
17	11			10			10.0	
18	3			1			200.0	
ABOVE 18	3			1			200.0	
UNGRADED	42	1	2.4	34			23.5	*
TOTAL B/	42,160	1,775	4.2	41,399	1,630	3.9	1.9	8.9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SOCIAL SCI PSYCH WELFARE WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	3			3				
02	3	2	66.7	12	8	66.7	- 75.0	- 75.0
03	78	38	48.7	59	33	55.9	32.2	15.2
04	151	81	53.6	152	95	62.5	- .7	- 14.7
05	1,109	572	51.6	781	481	61.6	41.0	18.9
06	363	215	59.2	304	223	73.4	19.4	- 3.6
07	2,125	1,087	51.2	2,168	1,170	53.0	- 1.0	- 7.1
08	684	283	41.4	805	312	38.8	- 15.0	- 9.3
09	6,969	3,520	50.5	6,665	3,269	49.0	4.6	7.7
10	2,345	340	14.5	1,192	332	27.9	96.7	2.4
11	4,857	1,436	29.6	5,022	1,445	28.8	- 3.3	- .6
12	5,304	729	13.7	5,297	710	13.4	.2	2.7
13	4,743	529	11.2	4,657	526	11.3	1.8	.6
14	2,898	255	8.8	2,837	262	9.2	2.2	- 2.7
15	1,395	110	7.9	1,268	103	8.1	10.0	6.8
16	656	17	2.6	648	23	3.5	1.2	- 26.1
17	360	7	1.9	311	6	1.9	15.8	16.7
18	28			28				
ABOVE 18	145	3	2.1	127	3	2.4	14.0	
UNGRADED								
TOTAL B/	34,219	9,224	26.0	32,336	9,001	27.8	5.8	2.5

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

PERSONNEL MGMT & IND RELAT — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	---- WOMEN ---- NUMBER	%	TOTAL	---- WOMEN ---- NUMBER	%	TOTAL	WOMEN
01	2	1	50.0	1			100.0	*
02	25	22	88.0	33	30	90.9	- 24.2	- 26.7
03	1,289	1,162	90.1	1,606	1,469	91.5	- 19.7	- 20.9
04	6,161	5,584	90.6	6,781	6,13[illegible]	90.4	- 9.1	- 8.0
05	6,721	5,410	80.5	6,904	5,477	79.3	- 2.7	- 1.2
06	3,718	2,240	60.2	3,534	2,034	57.6	5.2	10.1
07	3,543	2,031	57.3	3,524	2,013	57.1	.5	.9
08	485	230	47.4	503	234	46.5	- 3.6	- 1.7
09	2,962	1,494	50.4	3,161	1,591	50.3	- 6.3	- 6.1
10	384	126	32.8	430	136	31.6	- 10.7	- 7.4
11	4,638	1,664	35.9	4,597	1,601	34.8	.9	3.9
12	4,636	988	21.3	4,549	966	21.2	1.9	2.3
13	3,468	440	12.7	3,371	417	12.4	2.9	5.5
14	1,612	93	5.8	1,500	88	5.9	7.5	5.7
15	601	25	4.2	560	26	4.6	7.3	- 3.8
16	113	2	1.8	115	2	1.7	- 1.7	
17	44	2	4.5	38	2	5.3	15.8	
18	8			6			33.3	
ABOVE 18	1			3			- 66.7	
UNGRADED								
TOTAL B/	40,411	21,514	53.2	41,216	22,219	53.9	- 1.0	- 3.2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

GEN ADM CLER AND OFF SER — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	1,832	1,25[illegible]	68.6	1,907	1,32[illegible]	69.2	- 3.9	- 4.8
02	19,530	15,92[illegible]	81.5	20,256	16,567	81.8	- 3.6	- 3.9
03	77,049	67,831	88.0	83,685	74,910	89.4	- 7.9	- 9.3
04	93,169	84,113	90.3	95,869	86,884	90.6	- 2.8	- 3.2
05	78,918	66,747	84.6	77,519	64,917	83.7	1.8	2.8
06	43,756	30,323	69.3	41,896	29,889	71.3	4.4	1.5
07	31,393	19,750	62.9	30,793	18,933	61.5	1.9	4.3
08	8,227	5,240	63.7	7,243	4,646	64.1	13.6	12.8
09	21,153	8,617	40.7	21,048	8,287	39.4	.5	3.0
10	2,996	96[illegible]	32.3	2,824	884	31.4	6.1	9.3
11	18,864	4,397	23.3	18,238	4,035	22.1	3.4	8.9
12	19,783	2,594	13.1	18,734	2,314	12.4	5.6	12.1
13	15,720	1,154	7.3	14,731	977	6.6	6.7	18.1
14	8,549	383	4.5	8,008	358	4.5	6.8	6.0
15	5,269	160	3.0	4,900	132	2.7	7.9	21.2
16	1,286	27	2.1	1,260	20	1.6	2.1	35.0
17	726	[illegible]	.8	726	11	1.5		- 45.5
18	239	[illegible]	2.1	271	[illegible]	1.1	- 11.8	66.7
ABOVE 18	500	[illegible]	1.0	382	[illegible]	2.4	30.9	- 44.4
UNGRADED	79	36	45.6	73	34	46.6	8.2	5.9
TOTAL B/	449,057	309,533	68.9	450,363	315,038	69.0	- .3	- 1.7

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

BIOLOGICAL SCIENCES WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	12	8	66.7	16	12	75.0	- 25.0	- 33.3
02	571	100	17.5	436	75	17.2	30.0	33.3
03	1,479	158	10.7	1,068	141	13.2	38.5	12.1
04	2,001	222	11.1	1,906	199	10.4	4.0	11.6
05	3,605	379	10.5	3,496	358	10.2	3.1	5.9
06	2,542	119	4.7	2,475	119	4.8	2.7	
07	5,375	521	9.7	5,449	506	9.3	- 1.4	2.0
08	210	44	20.0	133	32	24.1	57.9	37.5
09	7,744	512	6.6	7,887	473	5.0	- 1.8	8.2
10	98	11	11.2	107	10	9.3	- 8.4	10.0
11	8,118	240	2.0	7,795	225	2.9	4.1	6.7
12	4,606	147	3.2	4,521	153	3.4	1.9	- 3.9
13	2,789	103	3.7	2,796	99	3.5	- .3	4.0
14	1,391	54	3.9	1,429	56	3.9	- 2.7	- 3.6
15	709	21	2.0	596	18	3.0	17.8	16.7
16	187	1	.5	211	4	1.9	- 11.4	- 75.0
17	60			69	1	1.4	- 13.0	-100.0
18	13			25			- 48.0	
ABOVE 18	24	1	3.8	4			550.0	*
UNGRADED								
TOTAL B/	41,531	2,641	6.4	40,419	2,481	6.1	2.8	6.4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ACCOUNTING AND BUDGET — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	4	3	75.0	8	4	50.0	- 50.0	- 25.0
02	146	113	77.4	235	199	84.7	- 37.9	- 43.2
03	3,053	2,577	84.4	3,642	3,179	87.3	- 16.2	- 18.9
04	13,280	11,168	84.1	14,874	12,661	85.1	- 10.7	- 11.8
05	22,404	16,631	74.2	23,525	17,118	72.8	- 4.8	- 2.8
06	11,219	8,151	72.7	10,291	7,400	71.9	9.0	10.1
07	11,892	6,834	57.5	11,424	6,556	57.4	4.1	4.2
08	2,604	1,154	44.3	2,463	1,085	44.1	5.7	6.4
09	9,382	3,489	37.2	9,544	3,500	36.7	- 1.7	- .3
10	1,139	249	21.0	1,069	233	21.8	5.9	6.9
11	12,190	1,750	14.4	12,521	1,699	13.6	- 2.6	3.0
12	11,284	845	7.5	10,856	784	7.2	3.9	7.8
13	8,798	320	3.6	8,499	304	3.6	3.5	5.3
14	4,019	70	1.7	3,690	68	1.8	8.9	2.9
15	1,446	6	.4	1,400	10	.7	3.3	- 40.0
16	246	3	1.2	255	3	1.2	- 3.5	
17	103			86			19.8	
18	29			30			- 3.3	
ABOVE 18	15			8			87.5	
UNGRADED	1			1				
TOTAL B/	113,247	53,363	47.1	114,421	54,803	47.9	- 1.0	- 2.6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D BY GENERAL SCHEDULE AND EQUIVALENT GRADES

MED HOSP DENT PUB HEALTH WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	25	10	40.0	44	33	75.0	- 43.2	- 69.7
02	1,725	1,265	73.3	1,786	1,387	77.7	- 3.4	- 8.8
03	12,325	7,011	56.9	14,834	8,041	54.2	- 16.9	- 12.8
04	18,379	9,042	49.2	17,891	8,674	48.5	2.7	4.2
05	9,552	4,850	50.8	8,275	3,884	46.9	15.4	24.9
06	5,204	2,734	52.5	4,279	2,384	55.7	21.6	14.7
07	9,913	8,100	81.7	9,718	7,957	81.9	2.0	1.8
08	2,529	1,598	63.2	2,990	1,753	58.6	- 15.4	- 8.8
09	13,563	11,605	85.6	12,354	10,737	86.9	9.8	8.1
10	1,059	638	60.2	1,386	589	42.5	- 23.6	8.3
11	4,382	2,516	57.4	4,450	2,193	49.3	- 1.5	14.7
12	5,114	1,196	23.4	3,887	1,111	28.6	31.6	7.7
13	2,049	497	24.3	1,803	508	28.2	13.6	- 2.2
14	2,431	343	14.1	2,958	446	15.1	- 17.8	- 23.1
15	4,616	421	9.1	4,152	259	6.2	11.2	62.5
16	487	22	4.5	811	36	4.4	- 39.0	- 38.9
17	179	3	1.7	152	1	.7	17.8	200.0
18	3			50			- 94.0	
ABOVE 18	126	1	.8	14			800.0	*
UNGRADED	2	2	100.0	2	2	100.0		
TOTAL B/	93,663	51,854	55.4	91,836	49,995	54.4	1.0	3.7

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

VETERINARY MEDICAL SCIENCE WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	---- WOMEN ---- NUMBER	%	TOTAL	---- WOMEN ---- NUMBER	%	TOTAL	WOMEN
01								
02								
03								
04								
05								
06								
07				3			-100.0	
08				1			-100.0	
09	11			11	1	9.1		-100.0
10	2						*	
11	215	15	1.0	917	20	2.2	- 11.1	- 20.0
12	853	8	.9	788	5	.6	8.9	60.0
13	364	3	.8	396	3	.8	- 7.6	
14	191	1	.5	184	1	.5	3.8	
15	90			56			60.7	
16	8			10			- 20.0	
17	3			3				
18								
ABOVE 18	2						*	
UNGRADED								
TOTAL B/	2,346	29	1.2	2,369	30	1.3	-	- 6.7

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C BY GENERAL SCHEDULE AND EQUIVALENT GRADES

ENGINEERING AND ARCHITECTURE WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	72	7	9.7	55	8	14.5	30.9	- 12.5
02	655	35	5.3	669	61	9.1	- 2.1	- 42.6
03	1,113	85	7.6	1,332	105	7.9	- 16.4	- 19.0
04	2,063	171	8.3	2,146	169	7.9	- 3.9	1.2
05	3,420	257	7.5	3,967	264	6.7	- 13.6	- 2.7
06	2,401	137	5.7	2,552	146	5.7	- 5.9	- 6.2
07	10,275	297	2.9	11,150	343	3.1	- 7.8	- 13.4
08	2,424	73	3.0	2,046	45	2.2	18.5	62.2
09	19,786	263	1.3	20,660	289	1.4	- 4.2	- 8.0
10	3,305	23	.7	3,293	26	.8	.4	- 11.5
11	30,641	172	.6	32,353	161	.5	- 5.3	6.8
12	31,461	143	.5	29,731	154	.5	5.8	- 7.1
13	24,142	69	.3	23,860	57	.2	1.2	21.1
14	10,913	17	.2	10,933	21	.2	- .2	- 19.0
15	4,946	7	.1	4,781	5	.1	3.5	40.0
16	734	1	.1	801			- 8.4	*
17	242			279			- 13.3	
18	45			44			2.3	
ABOVE 18	109	1	.9	4			*	*
UNGRADED								
TOTAL B/	148,755	1,758	1.2	150,656	1,854	1.2	- 1.3	- 5.2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE 6 BY GENERAL SCHEDULE AND EQUIVALENT GRADES

LEGAL AND KINDRED WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01								
02	4	1	25.0	4	2	50.0		- 50.0
03	269	218	82.3	273	237	86.8	- 2.9	- 8.0
04	4,352	3,977	91.4	4,249	3,880	91.3	2.4	2.5
05	5,645	4,010	79.5	4,554	3,743	82.2	10.8	7.1
06	5,836	5,426	92.0	5,328	4,904	92.0	9.5	10.6
07	2,836	1,742	61.4	3,054	1,950	63.9	- 7.1	- 10.7
08	2,500	1,429	57.2	1,888	956	50.6	32.4	49.5
09	2,521	1,082	42.9	2,613	1,087	41.6	- 3.5	- .5
10	2,046	742	36.3	1,934	627	32.4	5.8	18.3
11	3,293	661	20.1	3,483	630	18.1	- 5.5	4.9
12	3,863	398	10.2	3,642	354	9.7	6.6	12.4
13	3,293	234	7.1	3,030	197	6.5	8.7	18.8
14	2,359	144	6.1	2,255	141	6.3	4.6	2.1
15	2,204	78	3.5	2,041	66	3.2	7.0	18.2
16	643	15	2.3	626	12	1.9	2.7	25.0
17	172	2	1.2	161	5	3.1	6.8	- 60.0
18	49	1	2.1	52			- 7.7	*
ABOVE 18	87	4	4.6	73	5	6.8	19.2	- 20.0
UNGRADED	6,392	2,550	39.9	6,276	2,506	39.9	1.8	1.8
TOTAL B/	47,779	22,714	47.5	45,536	21,302	46.8	4.9	6.6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

INFORMATION AND ARTS — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	7	1	14.3	5	2	40.0	40.0	- 50.0
02	18	7	38.9	24	9	37.5	- 25.0	- 22.2
03	126	56	44.4	126	64	50.8		- 12.5
04	638	469	73.5	724	516	71.3	- 11.9	- 9.1
05	1,699	1,096	64.5	1,865	1,144	61.3	- 8.9	- 4.2
06	817	547	66.0	805	523	64.0	1.5	4.6
07	2,695	1,059	39.3	2,931	1,141	38.9	- 8.1	- 7.2
08	422	81	19.2	389	70	17.0	8.5	15.7
09	3,814	1,063	27.9	4,003	1,098	27.4	- 4.7	- 3.2
10	536	79	14.7	556	93	16.7	- 3.6	- 15.1
11	3,129	723	23.1	3,234	708	21.9	- 3.2	2.1
12	2,358	366	15.5	2,321	348	14.0	1.6	5.2
13	1,672	198	11.8	1,730	195	11.3	- 3.4	1.5
14	1,053	86	8.2	1,023	85	8.3	* 2.9	1.2
15	317	11	3.5	308	11	3.6	2.9	
16	194	3	1.5	215	6	2.8	- 9.8	- 50.0
17	65	3	4.6	62	5	8.1	4.8	- 40.0
18	8			11			- 27.3	
ABOVE 18	4			4				
UNGRADED	1			1				
TOTAL B/	19,573	5,848	29.9	20,337	6,018	29.6	- 3.8	- 2.8

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

BUSINESS AND INDUSTRY — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01				8			-100.0	
02	4	3	75.0	10	5	50.0	- 60.0	- 40.0
03	365	308	84.4	395	331	83.8	- 7.6	- 6.9
04	3,180	2,825	88.8	3,534	3,141	88.9	- 10.0	- 10.1
05	4,944	3,134	63.4	4,910	3,002	61.1	.7	4.4
06	1,524	875	57.4	1,329	721	54.3	14.7	21.4
07	5,862	2,125	36.1	5,763	2,164	37.5	2.1	- 1.8
08	997	102	10.2	1,025	103	10.0	- 2.7	-
09	11,747	2,319	19.7	12,873	2,303	17.9	- 8.7	.7
10	828	53	6.4	889	62	6.0	- 6.9	- 14.5
11	14,468	1,439	9.9	14,632	1,324	9.0	- 1.1	8.6
12	11,010	594	5.4	10,524	562	5.3	4.7	5.7
13	5,913	188	3.2	5,845	178	3.0	1.2	5.6
14	2,470	56	2.3	2,415	43	1.8	2.3	30.2
15	969	3	.3	978	5	.5	- .9	- 40.0
16	117	1	.9	123			- 4.9	*
17	44	1	2.3	48	1	2.1	- 8.3	
18	6			8			- 25.0	
ABOVE 18	12			5			140.0	
UNGRADED								
TOTAL B/	64,491	14,025	21.7	65,314	13,945	21.4	- 1.3	.6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

COPY PATENT - TRADE MARK — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	---- WOMEN ----		TOTAL	---- WOMEN ----			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01								
02								
03								
04								
05	23	5	21.7	30	5	16.7	- 23.3	
06	3			7	2	28.6	- 57.1	-100.0
07	128	19	14.8	136	25	18.4	- 5.9	- 24.0
08	1	1	100.0				*	*
09	159	16	10.1	149	27	18.1	6.0	- 40.7
10	2	1	50.0	1			100.0	*
11	187	32	17.1	170	19	11.2	10.0	68.4
12	187	16	8.6	192	16	8.3	- 2.6	
13	323	18	5.6	339	19	5.6	- 4.7	- 5.3
14	408	10	2.5	416	12	2.9	- 1.9	- 16.7
15	297	4	1.3	263	2	.8	12.9	100.0
16	33			36	1	2.8	- 8.3	-100.0
17	11	1	9.1	19			- 42.1	*
18	3			3				
ABOVE 18	8			1			700.0	
UNGRADED								
TOTAL B/	1,772	123	6.9	1,762	128	7.3	.6	- 3.9

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

PHYSICAL SCIENCES — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	14	3	21.4	18	9	50.0	- 22.2	- 66.7
02	141	24	17.0	182	38	20.9	- 22.5	- 36.8
03	269	108	40.1	356	130	36.5	- 24.4	- 16.9
04	534	200	37.5	661	250	37.8	- 19.2	- 20.0
05	1,187	376	31.7	1,467	447	30.5	- 19.1	- 15.9
06	689	196	28.5	714	195	27.3	- 3.6	.5
07	2,663	613	23.0	3,247	717	22.1	- 17.0	- 14.5
08	886	117	13.2	977	106	10.8	- 9.3	10.4
09	5,596	951	16.0	6,614	994	15.0	- 15.4	- 4.3
10	1,055	50	4.7	343	10	2.9	207.6	400.0
11	7,445	669	9.0	7,571	673	8.9	- 1.7	- .6
12	7,285	345	4.7	7,249	326	4.5	.5	5.8
13	6,961	213	3.1	6,798	194	2.9	2.4	9.8
14	4,163	60	1.4	4,147	64	1.5	.4	- 6.3
15	2,747	33	1.2	2,632	27	1.0	4.4	22.2
16	693	4	.6	758	4	.5	- 8.6	
17	356	1	.3	373	2	.5	- 4.6	- 50.0
18	57			118			- 51.7	
ABOVE 18	227	1	.4	16			*	*
UNGRADED								
TOTAL B/	42,967	3,964	9.2	44,241	4,186	9.5	- 2.9	- 5.3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

LIBRARY AND ARCHIVES — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	---- WOMEN ---- NUMBER	%	EMPLOYMENT 31 OCTOBER 1969 TOTAL	---- WOMEN ---- NUMBER	%	PERCENT CHANGE TOTAL	WOMEN
01	13	3	23.1	18	3	16.7	- 27.8	
02	59	35	59.3	64	46	71.9	- 7.8	- 23.9
03	435	305	70.1	536	372	69.4	- 18.8	- 18.0
04	661	610	70.9	925	639	69.1	- 6.9	- 4.5
05	1,170	813	69.9	1,286	838	65.2	- 9.0	- 2.4
06	673	472	70.1	629	431	68.5	6.0	9.5
07	1,011	668	66.1	1,036	668	64.5	- 2.4	
08	205	131	63.9	178	122	68.5	15.2	7.4
09	1,309	952	72.7	1,324	976	73.7	- 1.1	- 2.5
10	168	132	78.6	153	123	80.4	9.8	7.3
11	1,199	752	62.7	1,090	731	67.1	10.0	2.9
12	663	351	52.9	571	304	53.2	16.1	15.5
13	395	156	39.5	343	142	41.4	15.2	9.9
14	195	49	25.1	180	52	28.9	8.3	- 5.8
15	91	10	10.0	78	9	11.5	16.7	11.1
16	18			18	1	5.6		-100.0
17	8	1	12.5	4			100.0	*
18	3	1	33.3	5	1	20.0	- 40.0	
ABOVE 18	6			4			50.0	
UNGRADED	14	11	78.6	13	11	84.6	7.7	
TOTAL B/	8,496	5,457	64.2	8,455	5,469	64.7	.5	- .2

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE 8 BY GENERAL SCHEDULE AND EQUIVALENT GRADES

MATHEMATICS - STATISTICS WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	2						*	
02	9	9	100.0	11	10	90.9	- 18.2	- 10.0
03	221	157	71.0	225	174	77.3	- 1.8	- 9.8
04	975	802	82.3	1,224	1,050	85.8	- 20.3	- 23.6
05	1,569	1,267	80.8	1,771	1,436	81.1	- 11.5	- 11.8
06	805	685	85.1	836	712	85.2	- 3.7	- 3.8
07	1,453	983	67.7	1,650	1,043	63.2	- 11.9	- 5.8
08	237	111	46.8	225	106	47.1	5.3	4.7
09	1,396	677	48.5	1,548	713	46.1	- 9.8	- 5.0
10	60	28	46.7	112	24	21.4	- 46.4	16.7
11	1,675	463	27.6	1,543	430	27.9	8.6	7.7
12	1,735	300	17.3	1,566	282	18.0	10.8	6.4
13	1,789	239	13.4	1,653	227	13.7	8.2	5.3
14	1,128	80	7.1	1,048	74	7.1	7.6	8.1
15	728	24	3.3	690	25	3.6	5.5	- 4.0
16	130	1	.8	152			- 14.5	*
17	58	2	3.4	58	2	3.4		
18	12			21			- 42.9	
ABOVE 18	16						*	
UNGRADED								
TOTAL B/	13,997	5,828	41.6	14,333	6,308	44.0	- 2.3	- 7.6

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

EQUIPMENT, FACILITIES & SERV — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	3	3	100.0	2	2	100.0	50.0	50.0
02	1	1	100.0	1	1	100.0		
03	2	1	50.0	8	6	75.0	- 75.0	- 83.3
04	275	39	14.2	266	29	10.9	3.4	34.5
05	236	26	11.0	230	28	12.2	2.6	- 7.1
06	335	18	5.4	331	18	5.4	1.2	
07	1,178	94	7.0	1,336	93	6.0	- 11.8	1.1
08	301	4	1.3	298	7	2.3	1.0	- 42.9
09	5,384	83	1.5	6,002	97	1.6	- 10.3	- 14.4
10	499	6	1.2	561	7	1.2	- 11.1	- 14.3
11	5,181	62	1.2	5,703	70	1.2	- 9.2	- 11.4
12	3,348	14	.4	3,757	14	.4	- 10.9	
13	1,065	2	.2	1,069	1	.1	1.5	100.0
14	249	2	.8	245	2	.8	1.6	
15	71			61			16.4	
16	7			6			16.7	
17	3						*	
18								
ABOVE 18	2			2				
UNGRADED	1			1				
TOTAL B/	18,163	355	1.0	19,879	375	1.9	- 8.6	- 5.3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

EDUCATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN NUMBER	WOMEN %	TOTAL	WOMEN
01	29	29	100.0	20	20	100.0	45.0	45.0
02	73	65	89.0	27	23	85.2	170.4	182.6
03	574	408	71.1	429	300	69.9	33.8	36.0
04	1,463	1,074	73.4	2,004	1,603	79.0	- 26.0	- 33.0
05	3,172	2,610	82.3	4,132	3,294	79.7	- 23.2	- 20.8
06	2,532	1,779	70.2	2,487	1,565	62.9	1.8	13.6
07	4,422	1,005	22.7	3,692	1,262	34.2	19.8	- 20.4
08	1,570	443	28.2	1,691	561	33.2	- 7.2	- 21.0
09	6,485	1,831	28.2	6,576	1,695	25.8	- 1.4	8.0
10	572	171	29.9	578	160	27.7	- 1.0	6.9
11	3,597	485	13.5	3,413	383	11.2	5.4	26.6
12	2,091	268	12.8	1,866	170	9.1	12.1	57.6
13	1,265	126	9.0	1,246	106	8.5	1.5	18.9
14	881	89	10.1	755	93	12.3	16.7	- 4.3
15	370	26	7.0	307	15	4.9	20.5	73.3
16	123	7	5.7	86	2	2.3	43.0	250.0
17	25	1	4.0	22	1	4.5	13.6	
18	3			5			- 40.0	
ABOVE 18	4			2			100.0	
UNGRADED								
TOTAL B/	29,251	10,416	35.6	29,338	11,253	38.4	- .3	- 7.4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

INVESTIGATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	---- WOMEN ----		TOTAL	---- WOMEN ----			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	1						*	
02	1						*	
03	7			10	3	30.0	- 30.0	-100.0
04	194	69	35.6	109	39	35.8	77.0	76.9
05	1,436	202	14.1	1,078	148	13.7	33.2	36.5
06	499	78	15.6	461	68	14.8	8.2	14.7
07	6,468	445	6.9	5,670	327	5.8	14.1	36.1
08	935	4	.4	1,655	4	.2	- 43.5	
09	6,878	192	2.8	7,028	210	2.0	- 2.1	- 8.6
10	1,791	3	.2	1,630	3	.2	9.9	
11	6,444	160	2.5	6,130	163	2.7	5.1	- 1.8
12	5,547	65	1.2	5,191	33	.6	6.9	96.0
13	6,106	7	.1	5,906	4	.1	3.4	75.0
14	1,835	1	.1	1,719	2	.1	6.7	- 50.0
15	595			564			5.5	
16	104			85			22.4	
17	68			64			6.3	
18	18			19			- 5.3	
ABOVE 18	P			6			33.3	
UNGRADED								
TOTAL B/	38,935	1,226	3.1	37,325	1,004	2.7	4.3	22.1

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D BY GENERAL SCHEDULE AND EQUIVALENT GRADES

COMMOD QUAL CONT INSP-GS WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
01	5			1			400.0	
02	1						*	
03	8	2	25.0	20	10	50.0	- 60.0	- 80.0
04	30	4	13.3	56	13	23.2	- 46.4	- 69.2
05	224	34	15.2	478	77	16.1	- 53.1	- 55.8
06	360	34	9.7	337	18	5.3	15.4	88.9
07	2,306	325	14.1	2,522	347	13.8	- 8.6	- 6.3
08	348	3	.9	402	4		- 13.4	- 25.0
09	9,062	158	1.7	9,296	162	1.7	- 2.5	- 2.5
10	489	9	1.8	431	9	2.1	13.5	
11	5,379	37	.7	5,603	39	.7	- 3.0	- 5.1
12	2,223	10	.4	2,254	9	.4	- 1.4	11.1
13	707	4	.6	766	3	.4	- 7.7	33.3
14	184			189			- 1.6	
15	37			37				
16	1			1				
17								
18								
ABOVE 18								
UNGRADED								
TOTAL B/	21,395	620	2.9	22,393	691	3.1	- 4.5	- 10.3

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE B — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

SUPPLY GROUP — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	---- WOMEN ---- NUMBER	%	EMPLOYMENT 31 OCTOBER 1969 TOTAL	---- WOMEN ---- NUMBER	%	PERCENT CHANGE TOTAL	WOMEN
01	91	54	59.3	103	66	64.1	- 11.7	- 18.2
02	561	347	61.9	739	455	61.6	- 24.1	- 23.7
03	7,198	4,530	62.9	7,892	5,151	65.3	- 8.8	- 12.1
04	12,967	8,344	64.3	13,924	9,165	65.8	- 6.9	- 8.0
05	11,991	6,715	56.0	12,944	7,303	56.4	- 7.4	- 8.1
06	4,016	1,252	31.2	3,836	1,224	31.0	4.7	2.1
07	8,502	3,345	39.3	9,226	3,583	38.8	- 7.8	- 6.6
08	1,636	197	12.0	1,332	195	14.6	22.8	1.0
09	10,492	3,606	34.4	10,761	3,675	34.2	- 2.5	- 1.9
10	592	55	9.3	665	63	9.5	- 10.0	- 12.7
11	6,890	1,279	18.6	7,311	1,430	19.6	- 5.8	- 10.6
12	4,052	353	8.7	4,206	384	9.1	- 3.7	- 8.1
13	2,143	64	2.0	2,223	76	3.4	- 3.6	- 15.8
14	744	15	2.0	757	14	1.8	- 1.5	7.1
15	205	1	.5	229	1	.4	- 9.2	
16	21			21				
17	14			5			180.0	
18								
ABOVE 18								
UNGRADED	1			1				
TOTAL B/	72,121	30,157	41.8	76,175	32,787	43.0	- 5.3	- 8.0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE C — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

TRANSPORTATION — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970 TOTAL	WOMEN NUMBER	WOMEN %	EMPLOYMENT 31 OCTOBER 1969 TOTAL	WOMEN NUMBER	WOMEN %	PERCENT CHANGE TOTAL	PERCENT CHANGE WOMEN
01	1	1	100.0	1	1	100.0		
02	20	3	15.0	42	10	23.8	- 52.4	- 70.0
03	728	389	53.4	887	475	53.6	- 17.9	- 18.1
04	2,345	1,720	73.3	2,428	1,844	76.0	- 3.4	- 6.8
05	3,184	1,939	60.9	2,752	1,961	71.3	15.7	- 1.1
06	1,281	661	51.6	1,339	698	52.1	- 4.3	- 5.3
07	4,464	813	18.2	3,203	818	24.8	35.6	- .6
08	1,001	232	23.2	924	228	24.7	8.3	1.8
09	5,853	414	7.1	5,730	432	7.5	2.1	- 4.2
10	2,820	90	3.2	2,748	90	3.3	2.6	
11	6,039	205	3.4	5,674	193	3.4	6.4	6.2
12	5,859	80	1.4	6,100	77	1.3	- 3.0	3.9
13	6,400	32	.5	5,605	29	.5	14.2	10.3
14	2,211	6	.3	1,941	3	.2	13.9	100.0
15	325			287			13.2	
16	20			17			17.6	
17	9			8			12.5	
18	4			3			33.3	
ABOVE 18	6	1	16.7				*	*
UNGRADED								
TOTAL B/	42,572	6,584	15.5	39,779	6,861	17.2	7.0	- 4.0

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE D — BY GENERAL SCHEDULE AND EQUIVALENT GRADES

POSTAL GROUP — WORLDWIDE

GRADE A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
01	2,106	1,533	72.8	3,295	2,361	71.7	- 36.1	- 35.1
02	834	590	70.7	831	559	67.3	.4	5.5
03	1,102	759	68.9	947	618	65.3	16.4	22.8
04	44,908	8,762	19.5	7,208	5,740	79.6	523.0	52.6
05	427,717	74,367	17.4	472,022	77,792	16.5	- 9.4	- 4.4
06	43,918	8,926	20.4	45,758	8,013	17.5	- 4.2	11.4
07	19,352	1,859	9.6	28,506	1,643	5.8	- 32.1	13.1
08	18,560	909	4.9	18,937	793	4.2	- 1.9	14.6
09	19,834	430	2.2	12,696	267	2.1	54.8	61.0
10	5,922	107	1.2	4,159	66	1.6	114.5	62.1
11	4,390	47	1.1	1,999	35	1.8	119.6	34.3
12	1,960	20	1.0	2,159	21		- 9.2	- 4.8
13	1,231	8	.6	1,177	7	.6	4.6	14.3
14	147			103			42.7	
15	80	1	1.3	86			- 6.0	*
16	30			37	1	2.7	- 18.9	-100.0
17								
18								
ABOVE 18								
UNGRADED								
TOTAL B/	594,313	98,319	16.5	599,910	97,916	16.3	- .8	.4

A/ THE GRADES OR LEVELS OF THE VARIOUS PAY SYSTEMS HAVE BEEN CONSIDERED EQUIVALENT TO SPECIFIC GENERAL SCHEDULE GRADE SOLELY ON THE BASIS OF COMPARISON OF SALARY RATES, SPECIFICALLY, IN MOST INSTANCES, BY COMPARING THE 4TH STEP GS RATES WITH COMPARABLE RATES IN OTHER PAY SYSTEMS

B/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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FULL-TIME WHITE-COLLAR EMPLOYMENT

BY

SPECIAL OCCUPATIONAL CATEGORIES

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE E — BY SPECIAL CATEGORIES

ALL AGENCIES — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III	612,752	114,994	18.8	604,797	111,635	18.5	1.3	3.0
CATEGORY II	743,895	356,906	48.0	737,245	354,900	48.1	.9	.6
CATEGORY I	625,075	185,427	29.7	647,750	198,759	30.7	-3.5	- 6.7
GRAND TOTAL B/	1,981,722	657,327	33.2	1,989,792	665,294	33.4	- .4	- 1.2

A/ CATEGORIES I, II AND III ARE DEFINED IN THE INTRODUCTION.

B/ EXCLUDES EMPLOYEES OF CENTRAL INTELLIGENCE AGENCY, NATIONAL SECURITY AGENCY, BOARD OF GOVERNORS OF FEDERAL RESERVE SYSTEM AND FOREIGN NATIONALS OVERSEAS.

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MISCELLANEOUS OCCUPATIONS WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
CORRECTIONAL INST ADMIN	109	2	1.8	90	2	2.2	21.1	.0
BOND SALES PROMOTION	220	11	5.0	236	12	5.1	-6.7	-8.2
SAFETY MANAGEMENT	1,865	35	1.9	1,839	21	1.1	1.4	66.7
URBAN PLANNING	249	21	8.4	248	16	6.5	.4	31.3
CROP INSURANCE ADM	226	8	3.5	242	8	3.3	-6.5	.0
FUNERAL DIRECTING	47	1	2.1	48	2	4.2	-2.0	-49.9
CHAPLAIN	401	1	.2	410	7	1.7	-2.1	-85.6
SECURITY ADMIN	2,586	527	20.4	2,723	563	20.7	-4.9	-6.3
GUARD	42	1	2.4			.0	*	*
CATEGORY TOTAL	5,745	607	10.6	5,836	631	10.8	-1.5	-3.7
CATEGORY II								
TRADES, CRAFTS, AND LABOR	22		.0	17	2	11.8	29.4	-100.0
CORRECTIONAL OFFICER	2,849	139	4.9	2,642	132	5.0	7.8	5.3
OUTDOOR REC. PLAN	1		.0			.0	*	.0
PARK MANAGEMENT	1,425	60	4.2	951	24	2.5	49.8	150.0
PARK TECHNICIAN	258	58	22.5	32	11	34.4	706.3	427.3
SPORTS SPECIALIST.	8	2	25.0			.0	*	*
CLOTHING DESIGN	46	7	15.2	43	4	9.3	7.0	75.0
FINGERPRINT IDENTIFICAT	1,190	603	50.7	811	398	49.1	46.7	51.5
FIRE PROTECTION - PREVENT	11,402	17	.1	12,041	11	.1	-5.2	54.5
U S MARSHAL	990	6	.6	844	9	1.1	17.3	-33.2
POLICE	3,296	12	.4	2,787	8	.3	18.3	50.0
GUARD	11,811	38	.3	11,902	35	.3	-.7	8.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MISCELLANEOUS OCCUPATIONS — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
GUIDE	112	26	23.2	168	28	16.7	-33.2	-7.0
GENERAL STUDENT TRAINEE	82	4	4.9	138	39	28.3	-40.5	-89.6
CATEGORY TOTAL	33,492	972	2.9	32,376	701	2.2	3.4	38.7
CATEGORY I								
TRADES, CRAFTS, AND LABOR	52	23	44.2	1	1	100.0	*	*
PARK TECHNICIAN	25	16	64.0	6	6	100.0	316.7	166.7
SPORTS SPECIALIST,	1		.0			.0	*	.0
FINGERPRINT IDENTIFICAT	422	129	30.6	434	249	57.4	-2.7	-48.1
FIRE PROTECTION - PREVENT	253	2	.8	336	2	.6	-24.6	.0
POLICE	21	1	4.8	24		.0	-12.4	*
GUARD	2,126	16	.8	2,328	26	1.1	-8.6	-38.4
GUIDE	11	8	72.7	22	11	50.0	-49.9	-27.2
GENERAL STUDENT TRAINEE	21	1	4.8	36	3	8.3	-41.6	-66.6
CATEGORY TOTAL	2,932	196	6.7	3,187	298	9.4	-7.9	-34.1
OCCUP.GROUP TOTAL	42,169	1,775	4.2	41,399	1,630	3.9	1.9	8.9

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE 9 BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

SOCIAL SCI PSYCH WELFARE [illegible]

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
SOCIAL SCIENCE	1,661	506	30.5	1,534	456	29.7	8.3	11.0
SOCIAL INSURANCE ADM	10,669	4,012	37.6	8,653	3,694	42.7	23.3	8.6
UNEMPLOYMENT INSURANCE	108	14	13.0	106	14	13.2	1.9	.0
ECONOMISTS	4,314	48	11.1	4,358	496	11.4	-.9	-3.1
FOREIGN AFFAIRS	2,568	369	14.4	2,596	416	16.0	-1.0	-11.2
INTERNATL RELATIONS	1,256	47	3.8	1,532	62	4.0	-17.9	-22.5
INTELLIGENCE	3,049	374	12.3	3,415	458	13.4	-10.7	-18.2
FOREIGN AGRI AFFAIRS	130	1	.8	115		.0	12.1	*
INTERNATIONAL COOPERATION	58		.0	49	1	2.0	18.4	-100.0
MANPOWER RES & ANALYSIS	117	39	33.3	98	29	29.6	19.4	34.5
MANPOWER DEVELOPMENT	969	199	20.5	693	121	14.3	46.2	63.3
GEOGRAPHY	144	24	16.7	157	29	18.5	-8.2	-17.1
HISTORY	479	91	19.0	623	123	19.7	-23.0	-26.9
PSYCHOLOGY	2,158	295	13.7	2,049	270	13.2	5.3	9.3
SOCIOLOGY	53	15	28.3	48	11	22.9	10.4	36.4
SOCIAL WORK	2,395	1,119	46.7	2,362	1,129	47.8	1.4	-.9
RECREATION	2,091	661	31.6	2,217	718	32.4	-5.6	-7.8
GENERAL ANTHROPOLOGY	62	11	17.7	71	14	19.7	-12.6	-28.5
ARCHEOLOGY	48	4	8.3	42	2	4.8	14.3	50.0
CATEGORY TOTAL	32,329	8,255	25.5	30,691	8,243	26.2	5.3	2.0
CATEGORY II								
ECONOMICS ASSISTANT	98	61	62.2	96	60	62.5	2.1	1.7
INTELLIGENCE AID - CLERK	622	461	74.1	693	512	73.9	-10.1	-9.9

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

SOCIAL SCI PSYCH WELFARE WORLDWIDE

CATEGORY /	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
PSYCHOLOGY AID & TECH	230	135	58.7	208	115	55.3	10.6	17.4
PSYCHOLOGY AID & TECH	230	135	58.7	208	115	55.3	10.6	17.4
SOCIAL SERVICES AID & ASS	310	43	13.9	95	33	34.7	226.3	30.3
SOCIAL SERVICES	429	204	47.6	374	179	45.4	8.9	14.0
RECREATION AID & ASST	107	22	20.6	87	19	21.8	23.0	15.8
SOC SCI STUDENT TRAINEE	12	3	25.0	1		.0	*	*
SOC SCI STUDENT TRAINEE	12	3	25.0	1		.0	*	*
CATEGORY TOTAL	1,808	929	51.4	1,574	918	58.3	14.9	1.2
CATEGORY I								
INTELLIGENCE AID - CLERK	1	1	100.0	5	5	100.0	-79.9	-79.9
PSYCHOLOGY AID & TECH	11	6	54.5	1	1	100.0	*	500.0
SOCIAL SERVICES AID & ASS	37	25	67.6	30	26	86.7	24.3	-3.7
RECREATION AID & ASST	31	7	22.6	30	5	16.7	3.3	40.0
SOC SCI STUDENT TRAINEE	2	1	50.0	5	3	60.0	-59.9	-66.6
CATEGORY TOTAL	82	40	48.8	71	40	56.3	15.5	.0
OCCUP.GROUP TOTAL	34,219	9,224	27.0	32,336	9,001	27.8	5.8	2.5

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

PERSONNEL MGMT & IND RELA — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- MEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
PERSONNEL MANAGEMENT	9,186	2,228	24.3	9,251	2,336	25.3	-.6	-4.5
MILITARY PERSONNEL MGMT	705	155	22.0	496	109	22.0	42.1	42.2
PERSONNEL STAFFING	3,483	1,652	47.4	3,685	1,723	46.8	-5.4	-4.0
POSITION CLASSIFICATION	2,345	689	29.4	2,475	756	30.5	-5.2	-8.8
OCCUPATIONAL ANALYSIS	31	9	29.0	23	5	21.7	34.8	80.0
OCCUPATIONAL ANALYSIS	31	9	29.0	23	5	21.7	34.8	80.0
SALARY AND WAGE ADMIN	78	24	30.8	85	28	32.9	-8.1	-14.2
EMPL MGMT RELATNS & COOP	1,609	407	25.3	1,426	358	25.1	12.8	13.7
EMPLOYEE DEVELOPMENT	2,063	356	17.3	2,044	325	15.9	.9	9.5
MEDIATION	301	2	.7	306	2	.7	-1.5	.0
APPRENTICESHIP & TRAINING	247	3	1.2	259	4	1.5	-4.5	-24.9
LABOR MGMT RELATIONS EXAM	334	29	8.7	324	32	9.9	3.1	-9.3
CONTRACTOR INDUSTRIAL REL	156	4	2.6	176	4	2.3	-11.3	.0
CATEGORY TOTAL	20,538	5,558	27.1	20,550	5,682	27.6	.0	-2.1
CATEGORY II								
PERSONNEL CLERICAL & ASST	9,725	8,088	83.2	9,697	7,975	82.2	.3	1.4
MIL PERSONNEL CLER & TECH	8,835	6,684	75.7	9,332	7,065	75.7	-5.2	-5.3
CATEGORY TOTAL	18,560	14,772	79.6	19,029	15,040	79.0	-2.4	-1.7
CATEGORY I								
PERSONNEL CLERICAL & ASST	328	304	92.7	323	306	94.7	1.5	-.6
MIL PERSONNEL CLER & TECH	985	880	89.3	1,314	1,191	90.6	-24.9	-26.0
CATEGORY TOTAL	1,313	1,184	90.2	1,637	1,497	91.4	-19.7	-20.8
OCCUP.GROUP TOTAL	40,411	21,514	53.2	41,216	22,219	53.9	-1.9	-3.1

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

GEN ADM CLER AND OFF SER — WORLDWIDE

CATEGORY A/ / CATEGORY III	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	---WOMEN--- NUMBER	%	TOTAL	WOMEN
GENERAL CLERICAL AND ADM	36,864	6,388	17.3	35,130	5,718	16.3	4.9	11.7
MESSENGER	24		.0			.0	*	.0
INFORMATION RECEPTIONIST	2	2	100.0			.0	*	*
CLERK-STENO AND REPORTER	3	2	66.7			.0	*	*
SECRETARY	17	17	100.0			.0	*	*
DIGITAL COMPUTER SYS ADM	1,332	84	6.6	1,339	98	7.3	-.4	-10.1
COMPUTER SPECIALIST	20,059	4,229	21.1	18,596	4,044	21.7	7.9	4.6
PROGRAM MANAGEMENT	3,287	97	3.0	2,966	68	2.3	10.8	42.6
ADMIN OFF	9,359	3,080	32.9	9,533	3,053	32.0	-1.7	.9
MANAGEMENT ANALYSIS	9,295	1,535	16.5	9,472	1,602	16.9	-1.8	-4.1
MANAGEMENT ANALYSIS	9,295	1,535	16.5	9,472	1,602	16.9	-1.8	-4.1
PROGRAM ANALYSIS	7,640	1,475	19.3	7,512	1,472	19.6	1.7	.2
ELECT ACCT MACH PROJ PLAN	531	142	26.7	629	175	27.8	-15.5	-18.8
TELEPHONE OPER	3	3	100.0			.0	*	*
COMMUNICATIONS MANAGEMENT	1,021	99	9.7	916	94	10.3	11.5	5.3
COMMUNICATIONS SPECIALIST	2,310	129	5.6	2,533	149	5.9	-8.7	-13.3
CATEGORY TOTAL	91,747	17,288	18.8	88,626	16,473	18.6	3.5	4.9
CATEGORY II								
GENERAL CLERICAL AND ADM	81,286	53,095	65.3	76,435	50,420	66.0	6.3	5.3
MESSENGER	73	10	13.7	84	23	27.4	-13.0	-56.4
INFORMATION RECEPTIONIST	625	550	88.0	598	522	87.3	4.5	5.4
MAIL AND FILE	10,500	6,432	61.3	10,674	6,451	60.4	-1.5	-.2
CORRESPONDENCE CLERK	1,429	1,286	90.0	1,445	1,238	85.7	-1.0	3.9
CLERK-STENO AND REPORTER	35,149	34,641	98.6	37,606	37,024	98.5	-6.4	-6.3
CLERK-STENO AND REPORTER	35,149	34,641	98.6	37,606	37,024	98.5	-6.4	-6.3

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE 1 BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

GEN AD CLER AND OFF SER WASHINGTON

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1973			EMPLOYMENT 31 OCTOBER 1974			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
STENO - TYPING UNIT SUPER	368	344	93.5	394	364	92.4	-6.5	-5.4
CLERK-DICTAT MACH TRANSC	5,498	5,368	97.6	5,320	5,179	97.3	3.2	3.7
SECRETARY	62,585	62,097	99.2	62,383	61,901	99.2	.3	.3
CLOSED MICROPHONE REPORT	297	248	83.8	291	241	82.8	2.1	3.3
CLERK TYPIST	23,422	22,942	98.0	23,302	22,823	98.0	.5	.5
COLD-TYPE COMPOSING MACH	447	427	95.7	437	423	96.8	2.3	1.2
COMPUTER OPERATION	9,804	3,228	32.9	9,021	2,784	30.9	8.7	15.9
COMPUTER AID & TECHNICIAN	3,952	2,533	64.1	3,518	2,271	64.5	12.3	11.6
OFF SERV MANAGE AND SUPER	2,760	713	25.8	2,879	736	25.6	-4.0	-3.0
MANAGEMENT TECHNICIAN	3,984	2,171	54.5	4,021	2,146	53.4	-.9	1.3
MANAGEMENT TECHNICIAN	3,984	2,174	54.6	4,021	2,146	53.4	-.9	1.3
OFFICE MACHINE OPERATION	331	101	30.5	411	114	27.7	-19.4	-11.3
PRINTING CLERICAL	298	181	60.7	221	170	76.9	34.8	6.5
BOOKKEEPING MACH OPER	45	41	91.1	39	36	92.3	15.4	13.9
CALCULATING MACH OPER	46	42	91.3	46	41	89.1	.0	-2.3
CARD PUNCH OPER	3,676	3,599	97.9	3,630	3,570	98.3	1.3	.8
CODING	1,656	1,422	85.9	1,684	1,428	84.8	-1.6	-.3
ELECT ACCT MACH OPERATION	1,745	1,054	60.4	2,001	1,200	60.0	-12.7	-12.1
TELEPHONE OPER	2,368	2,326	98.2	2,380	2,342	98.4	-.4	-.6
TELETYPIST	1,710	1,023	59.8	1,788	1,062	59.4	-4.3	-3.6
CRYPTOGRAPHIC EQUIP OPER	307	84	27.4	387	113	29.2	-20.9	-25.6
RADIO OPER	128	8	6.3	139	8	5.8	-7.6	.0
COMM RELAY OPERATION	264	86	32.6	319	111	34.8	-17.1	-22.4
GENERAL COMMUNICATIONS	3,732	1,353	36.3	3,993	1,298	32.5	-6.6	4.2
COMMUNICATIONS CLERICAL	416	343	82.5	403	327	81.1	3.2	4.9

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

GEN ADM CLER AND OFF SER — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER		TOTAL	--- WOMEN --- NUMBER		TOTAL	WOMEN
CATEGORY TOTAL	258,901	207,235	80.0	255,849	205,101	80.2	1.2	.7
CATEGORY I								
GENERAL CLERICAL AND ADM	17,692	13,719	77.5	17,070	13,426	78.7	3.6	2.2
MESSENGER	1,159	131	11.3	1,432	145	10.1	-19.0	-9.6
INFORMATION RECEPTIONIST	409	376	90.5	433	395	91.2	-5.4	-6.2
MAIL AND FILE	14,002	8,783	62.7	13,859	9,027	65.1	1.0	-2.6
CORRESPONDENCE CLERK	305	292	95.7	305	304	99.7	.0	-3.8
CLERK-STENO AND REPORTER	5,148	5,109	99.2	5,680	5,625	99.0	-9.3	-9.1
STENO - TYPING UNIT SUPER	2	2	100.0	2	2	100.0	.0	.0
CLERK-DICTAT MACH TRANSC	1,035	1,015	98.1	1,045	1,019	97.5	-.9	-.3
SECRETARY	56	54	96.4	140	140	100.0	-59.9	-61.3
CLOSED MICROPHONE REPORT			.0	1		.0	-100.0	.0
CLERK TYPIST	42,624	41,116	96.4	47,526	45,844	96.5	-10.2	-10.2
COLD-TYPE COMPOSING MACH	77	76	98.7	83	79	95.2	-7.1	-3.7
COMPUTER OPERATION	517	423	81.8	390	282	72.3	32.6	50.0
COMPUTER AID & TECHNICIAN	212	119	56.1	214	138	64.5	-.8	-13.7
MANAGEMENT TECHNICIAN	1		.0			.0	*	.0
OFFICE MACHINE OPERATION	1,023	467	45.7	1,168	619	53.0	-12.3	-24.5
PRINTING CLERICAL	24	18	75.0	34	25	73.5	-29.3	-27.9
BOOKKEEPING MACH OPER	89	84	94.4	107	101	94.4	-16.7	-16.7
CALCULATING MACH OPER	38	38	100.0	56	53	94.6	-32.0	-28.2
CARD PUNCH OPER	9,436	9,115	96.6	11,189	10,884	97.3	-15.6	-16.2
CODING	436	356	81.7	494	432	87.3	-9.8	-17.5
ELECT ACCT MACH OPERATION	653	387	59.3	878	508	57.9	-25.5	-23.7

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

GEN ADM CLER AND OFF SER — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
TELEPHONE OPER	3,206	3,146	98.1	3,481	3,422	98.3	-7.8	-8.0
TELETYPIST	113	95	84.1	132	114	86.4	-14.3	-16.6
CRYPTOGRAPHIC EQUIP OPER	1	1	100.0	4	2	50.0	-74.9	-49.9
RADIO OPER	5	2	40.0	11	2	18.2	-54.4	.0
COMM RELAY OPERATION	7	3	42.9	16	4	25.0	-56.2	-24.9
GENERAL COMMUNICATIONS	68	47	69.1	79	61	77.2	-13.8	-22.9
COMMUNICATIONS CLERICAL	71	5[illegible]	7[illegible].4	69	51	73.9	2.9	-1.9
CATEGORY TOTAL	98,409	85,012	86.4	105,898	92,706	87.5	-7.0	-8.2
OCCUP.GROUP TOTAL	449,057	309,533	68.9	450,363	315,[illegible]38	70.0	-.2	-1.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

BIOLOGICAL SCIENCES — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GEN BIOLOGICAL SCIENCE	2,672	421	15.8	2,593	412	15.9	3.0	2.2
MICROBIOLOGY	1,516	429	28.3	1,497	393	26.3	1.3	9.2
PHARMACOLOGY	231	31	13.4	199	32	16.1	16.1	-3.0
AGRICULTURAL EXTENSION	160	18	11.3	182	21	11.5	-12.0	-14.2
ZOOLOGY	139	18	12.9	135	13	9.6	3.0	38.5
PHYSIOLOGY	327	39	11.9	325	43	13.2	.6	-9.2
ENTOMOLOGY	746	14	1.9	753	17	2.3	-.8	-17.5
BOTANY	119	25	21.0	116	23	19.8	2.6	8.7
PLANT PATHOLOGY	324	12	3.7	337	9	2.7	-3.8	33.3
PLANT PHYSIOLOGY	220	6	2.7	225	5	2.2	-2.1	20.0
PL QUARANT - PEST CONT	957	5	.8	963	6	.6	-.5	33.3
HORTICULTURE	137	1	.7	139	1	.7	-1.3	.0
GENETICS	160	7	4.4	151	7	4.6	6.0	.0
RANGE CONSERVATION	717	1	.1	711		.0	.8	*
SOIL CONSERVATION	4,592	6	.1	4,718	4	.1	-2.6	50.0
FORESTRY	5,844	6	.1	5,961	7	.1	-1.9	-14.2
SOIL SCIENCE	1,799	2	.1	1,816	1	.1	-.8	100.0
AGRONOMY	374		.0	386	1	.3	-3.0	-100.0
AGRICULTURAL MANAGEMENT	3,395	7	.2	3,298	5	.2	2.9	60.0
GEN FISH-WILDLIFE ADM	113	1	.9	114	1	.9	-.8	.0
FISHERY BIOLOGY	903	11	1.2	913	9	1.0	-1.0	22.2
WILDLIFE REFUGE MANAGE	406	1	.2	345		.0	17.7	*
WILDLIFE BIOLOGY	629	2	.3	611	3	.5	2.9	-33.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

BIOLOGICAL SCIENCES — WORLDWIDE

CATEGORY 1/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
HUSBANDRY	119	4	3.4	121	2	1.7	-1.6	100.0
HOME ECONOMICS	147	145	98.6	175	173	98.9	-16.0	-16.5
CATEGORY TOTAL	26,746	1,217	4.6	26,784	1,168	4.4	-.1	2.4
CATEGORY II								
BIOLOGICAL TECHNICIAN	4,357	1,093	25.1	4,126	1,042	25.3	5.6	4.9
PLANT PEST CONTROL TECH	286		.0	311	1	.3	-7.9	-100.0
RANGE TECHNICIAN	184	1	.5	174		.0	5.7	*
FOREST - RANGE FIRE CONT	1,494	49	3.3	1,428	14	1.0	4.6	250.0
SOIL CONSERVATION TECH	2,738		.0	2,685		.0	2.0	.0
IRRIGATION SYSTEM OPERAT	269		.0	282		.0	-4.5	.0
FORESTRY TECHNICIAN	3,294	15	.5	2,981	8	.3	10.5	87.5
FISH HATCHERY MANAGEMENT	90		.0	117		.0	-23.0	.0
BIOLOG SCI STUDENT TRAIN	13		.0	12		.0	8.3	.0
CATEGORY TOTAL	12,725	1,158	9.1	12,116	1,065	8.8	5.0	8.7
CATEGORY I								
BIOLOGICAL TECHNICIAN	343	169	49.0	408	177	43.4	-15.8	-5.0
PLANT PEST CONTROL TECH	6		.0	2		.0	200.0	.0
RANGE TECHNICIAN	7		.0	7	1	14.3	.0	-100.0
FOREST - RANGE FIRE CONT	514	45	8.8	444	23	5.2	15.8	95.7
SOIL CONSERVATION TECH	17	1	5.9	17		.0	.0	*
IRRIGATION SYSTEM OPERAT	52		.0	56		.0	-7.1	.0
FORESTRY TECHNICIAN	1,112	51	4.6	573	26	4.5	94.1	96.2
BIOLOG SCI STUDENT TRAIN	9	1	11.1	12	1	8.3	-24.9	.0
CATEGORY TOTAL	2,060	266	12.9	1,519	228	15.0	35.6	16.7

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

BIOLOGICAL SCIENCES — WORLDWIDE

CATEGORY 1/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
OCCUP.GROUP TOTAL	41,531	2,641	6.4	40,419	2,481	6.1	2.8	6.4

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

ACCOUNTING AND BUDGET — WORLDWIDE

CATEGORY a/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GEN ACCOUNT CLER AND ADM	2,943	785	26.7	2,543	735	28.9	15.7	6.8
BUDGET AND ACCOUNTING	732	155	21.2	706	153	21.7	3.7	1.3
FINANCIAL MANAGEMENT	1,197	41	3.4	1,196	40	3.3	.1	2.5
ACCOUNTING	20,389	1,429	7.0	20,241	1,409	7.0	.7	1.4
INTERNAL REVENUE AGENT	12,953	491	3.8	12,847	466	3.6	.8	5.4
BUDGET ADMIN	7,335	2,675	36.5	7,362	2,678	36.4	-.3	-.0
CATEGORY TOTAL	45,549	5,576	12.2	44,895	5,481	12.2	1.5	1.7
CATEGORY II								
GEN ACCOUNT CLER AND ADM	7,559	5,886	77.9	7,765	6,087	78.4	-2.6	-3.2
ACCOUNTS MAINTENANCE CLER	9,447	7,216	76.4	10,199	7,709	75.6	-7.3	-6.3
ACCOUNTING TECHNICIAN	13,785	9,714	70.5	13,788	9,697	70.3	.0	.2
TAX TECHNICIAN	2,793	1,541	55.2	2,791	1,530	54.8	.1	.7
CASH PROCESSING	2,220	1,547	69.7	2,211	1,501	67.9	.4	3.1
VOUCHER EXAM	5,340	4,296	80.4	5,502	4,414	80.2	-2.8	-2.6
FISCAL AUDITING	106	35	33.0	128	43	33.6	-17.1	-18.5
PAYROLL	4,441	3,601	81.1	4,409	3,612	81.9	.7	-.2
MILITARY PAY	4,435	3,373	76.1	4,642	3,600	77.6	-4.4	-6.2
BENEFIT PAYMENT ROLL	252	181	71.8	274	195	71.2	-7.9	-7.1
FINANCIAL INSTITUT EXAM	4,016	178	4.4	3,717	157	4.2	8.0	13.4
TIME AND LEAVE	1,173	223	19.0	1,461	246	16.8	-19.6	-9.2
TAX ACCOUNTING	8,520	7,146	83.9	8,333	6,983	83.8	2.2	2.3
INSURANCE ACCOUNTS	333	155	46.5	366	169	46.2	-8.9	-8.2
ACCTG STUDENT TRAINEE	78	5	6.4	70	6	8.6	11.4	-16.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

ACCOUNTING AND BUDGET — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY TOTAL	64,498	45,097	69.9	65,656	45,949	70.0	-1.7	-1.8-
CATEGORY I								
GEN ACCOUNT CLER AND ADM	381	310	81.4	399	340	85.2	-4.4	-8.7
ACCOUNTS MAINTENANCE CLER	844	741	87.8	977	879	90.0	-13.5	-15.6
CASH PROCESSING	503	423	84.1	605	527	87.1	-16.8	-19.6
VOUCHER EXAM	286	241	84.3	301	270	89.7	-4.9	-10.6
FISCAL AUDITING	1	1	100.0	2	1	50.0	-49.9	.0
PAYROLL	149	116	77.9	194	171	88.1	-23.1	-32.1
MILITARY PAY	466	433	92.9	557	521	93.5	-16.2	-16.8
BENEFIT PAYMENT ROLL	3	2	66.7	5	4	80.0	-39.9	-49.9
BUDGET ADMIN			.0	1		.0	-100.0	.0
TIME AND LEAVE	370	265	71.6	402	310	77.1	-7.9	-14.4
TAX ACCOUNTING	180	153	85.0	405	347	85.7	-55.5	-55.8
INSURANCE ACCOUNTS	2	1	50.0	2	1	50.0	.0	.0
ACCTG STUDENT TRAINEE	15	4	26.7	20	2	10.0	-24.9	100.0
CATEGORY TOTAL	3,200	2,690	84.1	3,870	3,373	87.2	-17.2	-20.1
OCCUP.GROUP TOTAL	113,247	53,363	47.1	114,421	54,803	47.9	-.9	-2.5

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MED HOSP DENT PUB HEALTH — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL HEALTH SCIENCE	584	117	20.0	433	81	18.7	34.9	44.4
MEDICAL OFFICER	9,315	682	7.3	9,172	644	7.0	1.6	5.9
PHYSICIANS ASSISTANT	53	48	90.6			.0	*	*
NURSE ANESTHETIST	427	360	84.3	425	362	85.2	.5	-.5
NURSE	23,084	22,407	97.1	22,257	21,617	97.1	3.7	3.7
PUBLIC HEALTH NURSE	186	183	98.4	226	222	98.2	-17.6	-17.5
DIETITIAN	983	963	98.0	988	966	97.8	-.4	-.2
OCCUPATIONAL THERAPIST	459	399	86.9	464	403	86.9	-1.0	-.9
PHYSICAL THERAPIST	597	312	52.3	613	327	53.3	-2.5	-4.5
CORRECTIVE THERAPIST	484	8	1.7	476	11	2.3	1.7	-27.2
MANUAL ARTS THERAPIST	327	2	.6	337	5	1.5	-2.9	-59.9
EDUCATIONAL THERAPIST	137	45	32.8	143	48	33.6	-4.1	-6.2
MEDICAL TECHNOLOGIST	1,921	1,390	72.4	1,737	1,249	71.9	10.6	11.3
PHARMACIST	1,149	72	6.3	1,121	75	6.7	2.5	-3.9
OPTOMETRIST	50	1	2.0	42	2	4.8	19.0	-49.9
SPEECH PATH AND AUDIOLOGY	222	97	43.7	181	72	39.8	22.7	34.7
PODIATRIST	27	1	3.7	23	1	4.3	17.4	.0
HOSPITAL ADMIN	402	13	3.2	348	11	3.2	15.5	18.2
PROSTHETIC REPRESENTATIVE	96		.0	94		.0	2.1	.0
DENTAL OFFICER	1,331	5	.4	1,280	6	.5	4.0	-16.6
PUB HEALTH PROGRAM SPEC	1,343	133	9.9	1,715	161	9.4	-21.6	-17.3
INDUSTRIAL HYGIENE	118	1	.8	124	1	.8	-4.7	.0
FOOD AND DRUG OFFICER	199	5	2.5	194	4	2.1	4.2	25.0

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MED HOSP DENT PUB HEALTH — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
FOOD AND DRUG INSPECT	640	35	5.5	636	18	2.8	.6	94.4
CATEGORY TOTAL	44,134	27,279	61.8	43,026	26,286	61.1	2.6	3.8
CATEGORY II								
NURSING ASSISTANT	23,389	11,344	48.5	20,569	9,523	46.3	13.7	19.1
MEDICAL AID-STERILE SUPPL	437	206	47.1	347	160	46.1	25.9	28.8
AUTOPSY ASSISTANT	127	2	1.6	128	1	.8	-.7	100.0
REHAB THER AS	991	124	12.5	1,005	128	12.7	-1.3	-3.0
MEDICAL TECHNICIAN	2,386	1,121	47.0	2,449	1,134	46.3	-2.5	-1.0
PATHOLOGY TECHNICIAN	396	244	61.6	340	211	62.1	16.5	15.6
MEDICAL RADIOLOGY TECH	1,725	480	27.8	1,665	447	26.8	3.6	7.4
MEDICAL MACHINE TECH	1,188	449	37.8	1,038	408	39.3	14.5	10.0
MEDICAL TECH ASSISTANT	162	2	1.2	130		.0	24.6	*
PHARMACY ASSISTANT	261	30	11.5	240	19	7.9	8.8	57.9
RESTORATION TECHNICIAN	39	2	5.1	37	2	5.4	5.4	.0
ORTHOTIST AND PROSTHETIST	226	4	1.8	225	4	1.8	.4	.0
MEDICAL RECORD LIBRARIAN	263	231	87.8	262	232	88.5	.4	-.3
HOSP HOUSEKEEPING MANAGE	338	23	6.8	335	23	6.9	.9	.0
DENTAL ASSISTANT	1,654	1,539	93.0	1,589	1,482	93.3	4.1	3.8
DENTAL HYGIENE	273	261	95.6	296	285	96.3	-7.7	-8.3
DENTAL LAB TECHNICIAN	698	39	5.6	692	36	5.2	.9	8.3
SANITARIAN	64		.0			.0	*	.0
ENVIRONMENT HEALTH TECH.	41	2	4.9			.0	*	*
HEALTH AID & TECH	800	187	23.4	813	165	20.3	-1.5	13.3
CATEGORY TOTAL	35,458	16,290	45.9	32,160	14,260	44.3	10.3	14.2

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MED HOSP DENT PUB HEALTH — WORLDWIDE

CATEGORY a/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY I								
NURSE			.0	2	2	100.0	-100.0	-100.0
NURSING ASSISTANT	12,760	7,496	58.7	15,233	8,623	56.6	-16.1	-13.0
MEDICAL AID-STERILE SUPPL	553	295	53.3	594	316	53.2	-6.8	-6.5
AUTOPSY ASSISTANT	18	2	11.1	21	1	4.8	-14.2	100.0
REHAB THER AS	31	10	32.3	41	12	29.3	-24.3	-16.6
MEDICAL TECHNICIAN	90	56	62.2	90	54	60.0	.0	3.7
MEDICAL TECHNICIAN	90	56	62.2	90	54	60.0	.0	3.7
PATHOLOGY TECHNICIAN	5	2	40.0	4	3	75.0	25.0	-33.2
MEDICAL RADIOLOGY TECH	12	7	58.3	20	4	20.0	-39.9	75.0
MEDICAL RADIOLOGY TECH	12	7	58.3	20	4	20.0	-39.9	75.0
MEDICAL MACHINE TECH	47	25	53.2	37	16	43.2	27.0	56.3
PHARMACY ASSISTANT	73	26	35.6	72	22	30.6	1.4	18.2
ORTHOTIST AND PROSTHETIST	7		.0	4	1	25.0	75.0	-100.0
DENTAL ASSISTANT	237	229	96.6	257	249	96.9	-7.7	-7.9
DENTAL LAB TECHNICIAN	2		.0	2	1	50.0	.0	-100.0
ENVIRONMENT HEALTH TECH.	1		.0			.0	*	.0
HEALTH AID & TECH	235	137	58.3	273	145	53.1	-13.8	-5.4
CATEGORY TOTAL	14,071	8,285	58.9	16,650	9,449	56.8	-15.4	-12.2
OCCUP.GROUP TOTAL	93,663	51,854	55.4	91,836	49,995	54.4	2.0	3.7

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

VETERINARY MEDICAL SCIENC — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
VETERINARY MED SCIENCE	2,346	28	1.2	2,368	30	1.3	-.8	-6.6
VETER STUDENT TRAINEE			.0	1		.0	-100.0	.0
CATEGORY TOTAL	2,346	28	1.2	2,369	30	1.3	-.9	-6.6
OCCUP.GROUP TOTAL	2,346	28	1.2	2,369	30	1.3	-.9	-6.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

ENGINEERING AND ARCHITECT — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL ENGINEERING	13,731	46	.3	13,862	44	.3	-.8	4.5
SAFETY ENGINEERING	468		.0	504	10	2.0	-7.0	-100.0
FIRE PREVENT ENGINEER	84	1	1.2	83		.0	1.2	*
MATERIALS ENGINEERING	880	13	1.5	861	13	1.5	2.2	.0
LANDSCAPE ARCHITECTURL	534	9	1.7	544	8	1.5	-1.7	12.5
ARCHITECTURE	1,415	48	3.4	1,515	43	2.8	-6.5	11.6
CIVIL ENGINEERING	16,476	68	.4	17,412	61	.4	-5.3	11.5
SANITARY ENGINEERING	967	4	.3	957	4	.4	1.0	-24.9
MECHANICAL ENGINEERING	10,493	46	.4	10,646	43	.4	-1.3	7.0
NUCLEAR ENGINEERING	1,548	4	.3	1,358	4	.3	14.0	.0
ELECTRICAL ENGINEERING	4,548	17	.4	4,589	14	.3	-.8	21.4
ELECTRONIC ENGINEERING	16,383	70	.4	16,353	64	.4	.2	9.4
AEROSPACE ENGINEERING	9,631	82	.8	9,673	83	.9	-.1	-1.1
NAVAL ARCHITECTURE	1,206	6	.5	1,244	7	.6	-3.0	-14.2
MINING ENGINEERING	512		.0	459		.0	11.5	.0
PETRO ENGR	248		.0	240		.0	3.3	.0
AGRICULTURAL ENGINEER	575	1	.2	600	2	.3	-4.1	-49.9
CERAMIC ENGINEERING	49	1	2.0	36	1	2.8	36.1	.0
CHEMICAL ENGINEERING	1,363	18	1.3	1,390	12	.9	-1.8	50.0
WELDING ENGINEERING	87		.0	92		.0	-5.3	.0
INDUSTRIAL ENGINEERING	2,288	6	.3	2,274	8	.4	.6	.0
CATEGORY TOTAL	83,506	441	.5	84,692	421	.5	-1.3	4.8
CATEGORY II								
ENGINEERING TECHNICIAN	27,735	705	2.5	28,257	728	2.6	-1.7	-3.1

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

ENGINEERING AND ARCHITECT — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CONSTRUCTION CONTROL	3,930	4	.1	3,591	2	.1	9.4	100.0
SURVEYING TECHNICIAN	2,157	3	.1	2,277	1	.0	-5.2	200.0
ENGINEERING DRAFTING	2,615	337	12.9	2,949	382	13.0	-11.2	-11.7
CONSTRUCTION ANALYST	924	8	.9	856	4	.5	7.9	100.0
ELECTRONIC TECHNICIAN	22,895	76	.3	22,637	84	.4	1.1	-9.4
SHIPBUILDING INSPECTION	21		.0	23		.0	-8.6	.0
SHIP SURVEYING	121		.0	140		.0	-13.5	.0
INDUSTRIAL ENGR TECH	2,484	42	1.7	2,703	49	1.8	-8.0	-14.2
ENGR & ARCH STUD TRAINEE	531	15	2.8	475	9	1.9	11.8	66.7
CATEGORY TOTAL	63,413	1,190	1.9	63,908	1,259	2.0	-.7	-5.4
CATEGORY I								
ENGINEERING TECHNICIAN	489	74	15.1	446	101	22.6	9.6	26.6
CONSTRUCTION CONTROL	24		.0	31		.0	-22.5	.0
SURVEYING TECHNICIAN	809	5	.6	771	2	.3	4.9	150.0
ENGINEERING DRAFTING	169	38	22.5	251	50	19.9	-32.6	-23.9
ELECTRONIC TECHNICIAN	2		.0	3		.0	-33.2	.0
INDUSTRIAL ENGR TECH	1		.0	4	1	25.0	-74.9	-100.0
ENGR & ARCH STUD TRAINEE	342	10	2.9	550	20	3.6	-37.7	-49.9
CATEGORY TOTAL	1,836	127	6.9	2,056	174	8.5	-10.6	-26.9
OCCUP.GROUP TOTAL	148,755	1,758	1.2	150,656	1,854	1.2	-1.2	-5.1

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

LEGAL AND KINDRED — WORLDWIDE

CATEGORY a/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
LAW CLERK	332	31	9.3	384	35	9.1	-13.4	-11.3
GENERAL ATTORNEY	10,597	655	6.2	10,172	634	6.2	4.2	3.3
ESTATE TAX EXAM	97	2	2.1	129	2	1.6	-24.7	.0
HEARING EXAM	587	8	1.4	565	7	1.2	3.9	14.3
DEPORT - EXCLUSION EXAM	30	1	3.3	31	1	3.2	-3.1	.0
CLERK OF COURT	20	6	30.0	20	4	20.0	.0	50.0
LEGAL ASSISTANCE	339	68	20.1	334	67	20.1	1.5	1.5
ADJUDICATING	126	41	32.5	122	41	33.6	3.3	.0
CONTACT REPRESENTATIVE	1,486	348	23.4	1,430	330	23.1	3.9	5.5
LAND LAW EXAMINING	133	75	56.4	136	84	61.8	-2.1	-10.6
PASSPORT & VISA EXAMINING	328	146	44.5	371	167	45.0	-11.5	-12.5
LEGAL CLERICAL AND ADM	24	3	12.5			.0	*	*
TAX LAW SPECIALIST	528	60	11.4	497	50	10.1	6.2	20.0
WORKMENS COMP CLAIMS EX	147	33	22.4	135	28	20.7	8.9	17.9
SOCIAL INSUR CLAIMS EX	8,457	4,563	54.0	7,206	3,669	50.9	17.4	24.4
VETERANS CLAIMS EXAMINING	2,385	492	20.6	2,294	429	18.7	4.0	14.7
CIV SERV RETIREMENT CLS E	175	88	50.3	136	73	53.7	28.7	20.5
MISC LEGAL & KINDRED	6,368	2,547	40.0			.0	*	*
CATEGORY TOTAL	32,159	9,167	28.5	23,962	5,621	23.5	34.2	63.1
CATEGORY II								
LEGAL INSTRUMENTS EXAM	2,053	1,657	80.7	2,114	1,680	79.5	-2.8	-1.3
LEGAL CLERICAL AND ADM	1,553	1,264	81.4	1,475	1,174	79.6	5.3	7.7
GENERAL CLAIMS EXAMINING	507	324	63.9	484	308	63.6	4.8	5.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

LEGAL AND KINDRED — WORLDWIDE

CATEGORY a/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
LOSS AND DAMAGE CLAIMS EX	103	64	62.1	97	59	60.8	6.2	8.5
UNEMPLOY COMP CLAIMS EXAM'	145	109	75.2	118	83	70.3	22.9	31.3
DEPEND AND ESTATES CL EX	104	67	64.4	141	82	58.2	-26.1	-18.2
CLAIMS CLERICAL	10,891	9,847	90.4	10,598	9,554	90.1	2.8	3.1
CATEGORY TOTAL	15,356	13,332	86.8	15,027	12,940	86.1	2.2	3.0
CATEGORY I								
LEGAL INSTRUMENTS EXAM	13	10	76.9	11	7	63.6	18.2	42.9
LEGAL CLERICAL AND ADM	77	67	87.0	98	69	70.4	-21.3	-2.8
GENERAL CLAIMS EXAMINING	1	1	100.0	1	1	100.0	.0	.0
CLAIMS CLERICAL	173	137	79.2	181	161	89.0	-4.3	-14.8
CATEGORY TOTAL	264	215	81.4	291	238	81.8	-9.2	-9.6
CATEGORY I								
MISC LEGAL & KINDRED			.0	6,256	2,503	40.0	-100.0	-100.0
CATEGORY TOTAL			.0	6,256	2,503	40.0	-100.0	-100.0
OCCUP.GROUP TOTAL	47,779	22,714	47.5	45,536	21,302	46.8	4.9	6.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

INFORMATION AND ARTS — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL ARTS & INFORMATN	517	114	22.1	521	110	21.1	-.7	3.6
MUSEUM CURATOR	161	39	24.2	165	40	24.2	-2.3	-2.4
FOR LANGUAGE BROADCASTING	148	29	19.6	166	34	20.5	-10.7	-14.6
AUDIO-VISUAL PRODUCTION	739	50	6.8	819	59	7.2	-9.7	-15.2
PUBLIC INFORMATION	2,350	584	24.9	2,294	565	24.6	2.4	3.4
WRITING AND EDITING	1,923	1,040	54.1	1,929	1,070	55.5	-.2	-2.7
TECH WRITING AND EDITING	1,758	449	25.5	1,812	466	25.7	-2.9	-3.5
VISUAL INFORMATION	1,144	194	17.0	1,152	202	17.5	-.6	-3.9
FOREIGN INFORMATION	1,563	177	11.3	1,777	202	11.4	-11.9	-12.3
CATEGORY TOTAL	10,303	2,676	26.0	10,635	2,748	25.8	-3.0	-2.5
CATEGORY II								
GENERAL ARTS & INFORMATN	219	137	62.6	248	156	62.9	-11.6	-12.1
EXHIBITS SPECIALIST	294	28	9.5	319	13	4.1	-7.7	115.4
MUSEUM SPEC AND TECH	258	66	25.6	280	81	28.9	-7.8	-18.4
ILLUSTRATING	2,636	602	22.8	2,802	667	23.8	-5.8	-9.6
OFFICE DRAFTING	183	67	36.6	195	82	42.1	-6.1	-18.2
TRANSLATOR	251	100	39.8	263	100	38.0	-4.5	.0
CLERK-TRANSLATOR	60	54	90.0	75	66	88.0	-19.9	-18.1
INTERPRETER	100	29	29.0	100	29	29.0	.0	.0
MUSICAL TECHNICIAN	8		.0	6		.0	33.3	.0
PHOTOGRAPHY	3,247	255	7.9	3,396	235	6.9	-4.3	8.5
EDITORIAL ASSISTANCE	1,874	1,774	94.7	1,874	1,770	94.5	.0	.2
CATEGORY TOTAL	9,130	3,112	34.1	9,558	3,199	33.5	-4.4	-2.6

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

INFORMATION AND ARTS — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY I								
GENERAL ARTS & INFORMATN	73	26	35.6	75	34	45.3	-2.6	-23.4
MUSEUM SPLC AND TECH	11	4	36.4	7	3	42.9	57.1	33.3
ILLUSTRATING			.0	1	1	100.0	-100.0	-100.0
OFFICE DRAFTING	28	5	17.9	32	7	21.9	-12.4	-28.5
WRITING AND EDITING			.0	1		.0	-100.0	.0
EDITORIAL ASSISTANCE	28	25	89.3	28	26	92.9	.0	-3.7
CATEGORY TOTAL	140	60	42.9	144	71	49.3	-2.7	-15.4
OCCUP.GROUP TOTAL	19,573	5,848	29.9	20,337	6,018	29.6	-3.7	-2.7

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F . BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

BUSINESS AND INDUSTRY WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GEN BUSINESS AND INDUSTRY	4,074	561	13.8	3,664	440	12.0	11.2	27.5
CONTRACT AND PROCUREMENT	17,533	4,480	25.6	18,574	4,711	25.4	-5.5	-4.8
PROPERTY DISPOSAL	1,243	171	13.8	1,173	152	13.0	6.0	12.5
PURCHASING	164	36	22.0	164	52	31.7	.0	-30.7
PROCUREMENT CLERICAL	24	19	79.2	15	9	60.0	60.0	111.1
PUBLIC UTILIT SPECIALIST	217	36	16.6	219	35	16.0	-.8	2.9
TRANSPORTATION INDUSTRY A	183	22	12.0	176	23	12.9	2.8	-4.2
TRADE SPECIALIST	399	67	16.8	390	63	16.2	2.3	6.3
AGRICULTURAL PROGRAM SPLC	466	11	2.4	452	6	1.3	3.1	83.3
AGRI MARKETING	581	36	6.2	550	28	5.1	5.6	28.6
AGRI MARKET REPORTING	204	4	2.0	202	2	1.0	1.0	100.0
WAGE AND HOUR LAW ADM	44	12	27.3	56	10	17.9	-21.3	20.0
INDUSTRIAL SPECIALIST	4,637	90	1.9	5,075	111	2.2	-8.5	-18.8
FINANCIAL ANALYSIS	703	52	7.4	677	42	6.2	3.8	23.8
INSURANCE EXAMINING	74	13	17.6	50	16	32.0	48.0	-18.7
LOAN SPECIALIST	2,454	257	10.5	2,344	258	11.0	4.7	-.3
INTER REVENUE OFF	5,961	267	4.5	5,695	249	4.2	-.5	7.2
REALTY	2,686	290	10.8	2,781	280	10.1	-3.3	3.6
APPRAISING AND ASSESSING	2,681	38	1.4	2,658	32	1.2	.9	18.1
HOUSING MANAGEMENT	806	212	26.3	714	157	22.0	12.9	35.0
BUILDING MANAGEMENT	705	17	2.4	676	10	1.5	4.3	70.0
CATEGORY TOTAL	45,839	6,691	14.6	46,607	6,860	14.3	-1.5	.1
CATEGORY II								
INDUSTRIAL PROPERTY ADMIN	891	65	7.3	955	70	7.3	-6.7	-7.0

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

BUSINESS AND INDUSTRY — MILWAUKEE

CATEGORY AV	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
PURCHASING	4,050	2,704	66.8	5,915	4,448	75.2	-31.4	-39.1
PROCUREMENT CLERICAL	4,321	3,904	90.3	2,481	2,197	88.6	74.2	77.7
PROP. DISPOSAL CLER. & TE	2	2	100.0			.0	*	*
COMMISSARY STORE MGMT	946	25	2.6	935	21	2.2	1.2	14.3
PRODUCTION CONTROL	8,110	349	4.3	8,185	322	3.9	-.9	8.4
CATEGORY TOTAL	18,320	7,048	38.5	18,471	7,058	38.2	-.7	-.0
CATEGORY I								
PROCUREMENT CLERICAL	332	284	85.1	236	201	85.2	40.7	42.3
CATEGORY TOTAL	332	284	85.1	236	201	85.2	40.7	42.3
OCCUP.GROUP TOTAL	64,491	14,025	21.7	65,314	13,945	21.4	-1.2	.6

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

COPY PATENT - TRADE MARK — WORLDWIDE

CATEGORY AA	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
COPYRIGHT EXAM	117	65	55.6	123	65	52.8	-4.8	.0
PATENT ADMIN	63	1	1.6	67	1	1.5	-5.9	.0
PATENT ADVISER	203	1	.5	206	3	1.5	-1.4	-66.6
PATENT ATTORNEY	118	2	1.7	123	2	1.6	-4.0	.0
PATENT CLASSIFYING	47	1	2.1	66	6	9.1	-28.7	-83.2
PATENT EXAM	1,172	41	3.9	1,119	41	3.7	4.7	12.2
PATENT INTERFERENCE EX	8		.0	9		.0	-11.0	.0
DESIGN PATENT EXAM	20	3	15.0	21	3	14.3	-4.7	.0
CATEGORY TOTAL	1,748	113	6.6	1,734	121	7.0	.8	-1.5
CATEGORY II								
PATENT TECHNICIAN	13	4	30.8	14	6	42.9	-7.0	-33.2
TRADE MARK EXAM	11		.0	14	1	7.1	-21.3	-100.0
CATEGORY TOTAL	24		16.7	28	7	25.0	-14.2	-42.8
OCCUP.GROUP TOTAL	1,772	121	6.9	1,762	128	7.3	.6	-3.8

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

PHYSICAL SCIENCES — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL PHYSICAL SCIENCE	8,259	314	3.8	8,542	335	3.9	-3.2	-6.2
HEALTH PHYSICS	405	5	1.2	378	4	1.1	7.1	25.0
PHYSICS	5,417	132	2.4	5,700	159	2.8	-4.9	-16.9
GEOPHYSICS	377	3	.8	389	5	1.3	-3.0	-39.9
HYDROLOGY	1,209	5	.4	1,136	7	.6	6.4	-28.5
CHEMISTRY	8,138	1,258	15.5	8,248	1,249	15.1	-1.2	.7
METALLURGY	608	9	1.5	627	7	1.1	-2.9	28.6
ASTRONOMY - SPACE SCIENCE	141	15	10.6	124	16	12.9	13.7	-6.2
METEOROLOGY	2,244	29	1.3	2,364	31	1.3	-5.0	-6.4
GEOLOGY	1,699	85	5.0	1,728	88	5.1	-1.6	-3.3
OCEANOGRAPHY	780	37	4.7	753	30	4.0	3.6	23.3
CARTOGRAPHY	2,910	251	8.6	3,082	279	9.1	-5.5	-9.9
GEODESY	369	16	4.3	371	16	4.3	-.4	.0
CADASTRAL SURVEYING	200		.0	196		.0	2.0	.0
FOREST PRODUCTS TECHNOL	146	3	2.1	140	3	2.1	4.3	.0
FOOD TECHNOLOGY	119	23	19.3	118	18	15.3	.8	27.8
TEXTILE TECHNOLOGY	107	11	10.3	101	10	9.9	5.9	10.0
PHOTOGRAPHIC TECHNOLOGY	108	1	.9	103		.0	4.9	*
CATEGORY TOTAL	33,236	2,197	6.6	34,100	2,257	6.6	-2.4	-2.6
CATEGORY II								
PHYSICAL SCIENCE TECH	3,291	631	19.2	3,349	648	19.3	-1.6	-2.5
METEOROLOGICAL TECHNICIAN	2,655	228	8.6	2,550	233	9.1	3.7	-2.0
NAVIGATIONAL INFORMATION	497	32	6.4	522	32	6.1	-4.7	.0

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

PHYSICAL SCIENCES WASHINGTON

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CARTOGRAPHIC TECHNICIAN	2,722	714	26.2	2,994	801	26.8	-9.0	-10.8
GEODETIC TECHNICIAN	103	9	8.7	127	16	12.6	-18.9	-43.7
DOCUMENT ANALYSIS	47	14	29.8	44	15	34.1	6.8	-6.6
PHYS SCI STUDENT TRAINEE	80	4	5.0	99	7	7.1	-19.1	-42.8
CATEGORY TOTAL	9,395	1,632	17.4	9,695	1,752	18.1	-3.0	-6.7
CATEGORY I								
PHYSICAL SCIENCE TECH	157	68	43.3	199	76	38.2	-21.0	-10.4
METEOROLOGICAL TECHNICIAN	20	2	10.0	20	4	20.0	.0	-49.9
CARTOGRAPHIC TECHNICIAN	115	58	50.4	148	84	56.8	-22.2	-30.9
GEODETIC TECHNICIAN	1	1	100.0	3	1	33.3	-66.6	.0
PHYS SCI STUDENT TRAINEE	43	6	14.0	76	12	15.8	-43.3	-49.9
CATEGORY TOTAL	336	135	40.2	446	177	39.7	-24.6	-23.6
OCCUP.GROUP TOTAL	42,967	3,964	9.2	44,241	4,186	9.5	-2.8	-5.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

LIBRARY AND ARCHIVES WORKSHEET

CATEGORY AY	EMPLOYMENT 31 OCTOBER 1273			EMPLOYMENT 31 OCTOBER 1369			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
LIBRARIAN	3,470	2,453	70.7	3,443	2,425	70.4	-.8	1.2
LIBRARY TECHNICIAN	10	7	70.0			.0	*	*
TECHNICAL INFORMATION SER	754	319	42.3	722	312	43.2	4.4	2.2
ARCHIVIST	276	60	21.7	44	16	36.4	527.3	275.0
CATEGORY TOTAL	4,510	2,841	63.0	4,209	2,753	65.4	7.2	3.2
CATEGORY II								
LIBRARY TECHNICIAN	2,885	2,113	73.4	2,823	2,095	74.2	2.2	1.1
ARCHIVES TECHNICIAN	596	154	25.8	792	189	23.9	-24.6	-18.4
CATEGORY TOTAL	3,481	2,273	65.3	3,615	2,284	63.2	-3.6	-.4
CATEGORY I								
LIBRARIAN			.0	4	2	50.0	-100.0	-100.0
LIBRARY TECHNICIAN	385	271	70.4	466	343	73.6	-17.3	-20.9
ARCHIVES TECHNICIAN	120	72	60.0	161	87	54.0	-25.4	-17.1
CATEGORY TOTAL	505	343	67.9	631	432	68.5	-19.9	-20.5
OCCUP.GROUP TOTAL	8,496	5,457	64.2	8,455	5,469	64.7	.5	-.1

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE I BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

MATHEMATICS - STATISTICS WORLDWIDE

CATEGORY 1/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
ACTUARY	90	14	15.6	87	11	12.6	3.4	27.3
OPERATIONS RESEARCH	1,947	89	4.3	1,645	77	4.7	12.3	3.9
MATHEMATICS	3,496	743	21.3	3,553	789	22.2	-1.5	-5.7
MATHEMATICAL STATISTICIAN	823	163	19.8	781	143	18.3	5.4	14.0
STATISTICIAN	2,322	490	21.1	2,248	456	20.3	3.3	7.5
CRYPTOGRAPHY	32	3	9.4	40	3	7.5	-19.9	.0
CATEGORY TOTAL	8,610	1,493	17.3	8,354	1,479	17.7	3.1	.9
CATEGORY II								
MATHEMATICS TECHNICIAN	342	241	70.5	383	272	71.0	-10.6	-11.3
STATISTICAL ASSISTANT	4,741	3,916	82.6	5,282	4,357	82.5	-10.1	-10.0
CRYPTANALYSIS	25		.0	26		.0	-3.7	.0
MATH SCI STUDENT TRAINEE	48	12	25.0	52	16	30.8	-7.6	-24.9
CATEGORY TOTAL	5,156	4,169	80.9	5,743	4,645	80.9	-10.1	-10.1
CATEGORY I								
MATHEMATICS TECHNICIAN	30	20	66.7	36	23	63.9	-16.6	-12.9
STATISTICAL ASSISTANT	175	136	77.7	164	144	87.8	6.7	-5.5
MATH SCI STUDENT TRAINEE	26	10	38.5	36	17	47.2	-27.7	-41.1
CATEGORY TOTAL	231	166	71.9	236	184	78.0	-2.0	-9.7
OCCUP.GROUP TOTAL	13,997	5,828	41.6	14,333	6,308	44.0	-2.2	-7.5

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

EQUIPMENT, FACILITIES & S — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
FACILITY MANAGEMENT	1,721	16	.9	1,645	10	.6	4.6	60.0
BLDG GROUNDS TECH MANAGE	487	5	1.0	487	4	.8	.0	25.0
PRINTING MANAGEMENT	1,806	202	20.1	1,801	204	20.4	.5	-.9
LAUNDRY AND DRY CLEANING	158	2	1.3	165	3	1.8	-4.1	-33.2
CATEGORY TOTAL	3,372	225	6.7	3,298	221	6.7	2.2	1.8
CATEGORY II								
CEMETERY ADMINISTRATION	153	6	3.9	144	2	1.4	6.3	200.0
FACILITY MAINTENANCE	1,316	1	.1	1,750	1	.1	-24.7	.0
FISHERY METHODS AND EQUIP	19	1	5.3	18		.0	5.6	*
GENERAL HOUSEKEEPING	308	39	12.7	298	31	10.4	3.4	25.8
STEWARD	67	11	16.4	68	8	11.8	-1.4	37.5
EQUIPMENT SPECIALIST	12,923	67	.5	14,292	103	.7	-9.5	-34.9
CATEGORY TOTAL	14,786	125	.8	16,570	145	.9	-10.7	-13.7
CATEGORY I								
PRINTING MANAGEMENT			.0	1		.0	100.0	.0
GENERAL HOUSEKEEPING	1	1	100.0	4	4	100.0	-74.9	-74.9
STEWARD	4	4	100.0	6	5	83.3	-33.2	-19.9
CATEGORY TOTAL	5	5	100.0	11	9	81.8	-54.4	-44.3
OCCUP.GROUP TOTAL	18,163	355	2.0	19,879	375	1.9	-8.5	-5.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

EDUCATION — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL EDUCATION - TRAIN	358	82	22.9	256	53	20.7	39.8	54.7
EDUCAT - VOCAT TRAIN	16,212	7,764	47.9	16,634	8,912	53.6	-2.4	-12.8
VOCATIONAL REHABILITATION	197	9	4.6	174	5	2.9	13.2	80.0
EDUCATIONAL RES - PROG	1,067	298	27.9	1,003	304	30.3	6.4	-1.9
PUBLIC HEALTH EDUCATOR	57	17	29.8	52	19	36.5	9.6	-10.4
CATEGORY TOTAL	17,891	8,170	45.7	18,119	9,293	51.3	-1.2	-12.0
CATEGORY II								
GENERAL EDUCATION - TRAIN	11	7	63.6	17	11	64.7	-35.2	-36.3
EDUCAT & TRAIN TECH	618	328	53.1	481	220	45.7	28.5	49.1
INSTRUCTION	10,092	1,446	14.3	10,279	1,418	13.8	-1.7	2.0
CATEGORY TOTAL	10,721	1,781	16.6	10,777	1,649	15.3	- .4	8.0
CATEGORY I								
EDUCAT & TRAIN TECH	305	255	83.6	162	128	79.0	88.3	99.2
INSTRUCTION	334	210	62.9	280	183	65.4	19.3	14.8
CATEGORY TOTAL	639	465	72.8	442	311	70.4	44.6	49.5
OCCUP.GROUP TOTAL	29,251	10,416	35.6	29,338	11,253	38.4	- .2	-7.3

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

INVESTIGATION — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL INVESTIGATING	2,229	9	.4	2,650	22	.8	-15.8	-59.0
CRIMINAL INVESTIGATING	15,489	12	.1	14,610	14	.1	6.0	-14.2
GAME LAW ENFORCEMENT	191		.0	188		.0	1.6	.0
WAGE-HOUR LAW ENFORCE	1,114	72	6.5	1,202	68	5.7	-7.2	5.9
AIR SAFETY INVESTIGATING	165		.0	154	2	1.3	7.1	-100.0
AVIATION SAFETY OFFICER	2,044	2	.1	1,972	1	.1	3.7	100.0
IMPORT SPECIALIST	1,118	184	16.5	1,071	152	14.2	4.4	21.1
CUSTOMS APPRAIS AND EXAM	5		.0	8		.0	-37.4	.0
CUSTOMS MARINE OFFICER	148	37	25.0	142	29	20.4	4.2	27.6
CATEGORY TOTAL	22,503	316	1.4	21,997	288	1.3	2.3	9.7
CATEGORY II								
IMMIGRATION INSPECTION	1,164	63	5.4	1,167	51	4.4	-.2	23.5
SAFETY INSPECT	113	1	.9	156	1	.6	-27.5	.0
COAL MINE INSPECT	462		.0	284		.0	62.7	.0
AGRI COMMOD WAREHSE EXAM	193		.0	198		.0	-2.4	.0
ALCOHOL - TOB TAX INSPECT	1,052	142	13.5	1,061	154	14.5	-.7	-7.7
PUBLIC HEALTH INSPECT	172	2	1.2	202	4	2.0	-14.8	-49.9
FOOD & DRUG INSPECT TECH	38	6	15.8	31	3	9.7	22.6	100.0
FOOD INSPECT	5,831	265	4.5	5,540	198	3.6	5.3	33.8
PUB HEALTH QUARANT INSP	232	7	3.0	264	6	2.3	-12.0	16.7
CUSTOMS INSPECT	3,478	122	3.5	2,958	57	1.9	17.6	114.0
CUSTOMS ENFURCEMENT OFF	161		.0	91		.0	76.9	.0
CUSTOMS ENTRY - LIQUIDAT	113	2[illegible]	24.8	131	29	22.1	-13.6	-3.3

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

INVESTIGATION — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CUSTOMS WAREHOUSE OFFICER	296	5	1.7	285	6	2.1	3.9	-16.6
IMMIGRATION PATROL INSP	1,450		.0	1,412		.0	2.7	.0
CUSTOMS AID	696	266	38.2	642	200	31.2	8.4	33.0
ADMEASUREMENT	62		.0	65		.0	-4.5	.0
MISCELLANEOUS INSPECTION	917	3	.3	846	4	.5	9.7	-24.9
CATEGORY TOTAL	16,430	910	5.5	15,323	713	4.7	7.2	27.6
CATEGORY I								
FOOD & DRUG INSPECT TECH			.0	1	1	100.0	-100.0	-100.0
CUSTOMS AID	2		.0	4	2	50.0	-49.9	-100.0
CATEGORY TOTAL	2		.0	5	3	60.0	-59.9	-100.0
OCCUP.GROUP TOTAL	38,935	1,226	3.1	37,325	1,004	2.7	4.3	22.1

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

COMMOD QUAL CONT INSP-GR — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GEN COMMOD QUAL CON-INSP	1,985	26	1.3	2,269	35	1.5	-12.4	-25.6
QUAL CONT AND INSP MANAG	1,926	42	2.2	2,045	41	2.0	-5.7	2.4
SUBSISTENCE QUAL CON-INSP	111	7	6.3	124	10	8.1	-10.4	-29.9
CL TEX-LEAT QUAL CON-INSP	248	11	4.4	289	15	5.2	-14.1	-26.6
QUALITY ASSURANCE	422	7	1.7			.0	*	*
CHEMICAL QUAL CONT - INSP	54		.0	63		.0	-14.2	.0
PETRO QUAL CONT AND INSP	219	2	.9	226	2	.9	-3.0	.0
MATERIALS QUAL CONT-INSP	300	1	.3	280		.0	7.1	*
ELEC EQ QUAL CONT - INSP	248	6	2.4	304	7	2.3	-18.3	-14.2
ELECTRO EQ QUAL CONT-INSP	2,944	34	1.2	3,046	41	1.3	-3.2	-17.0
MECH EQ QUAL CON AND INSP	2,702	38	1.7	2,584	76	2.9	-14.7	-49.9
AUTO EQ QUAL CON AND INSP	255		.0	324	1	.3	-21.2	-100.0
AIRCRAFT QUAL CON - INSP	2,537	12	.5	2,571	9	.4	-1.2	33.3
ORD QUAL CON AND INSP	550	40	7.3	626	57	9.1	-12.0	-29.7
AMMO QUAL CONT AND INSP	1,769	259	14.6	1,903	267	14.0	-6.9	-2.9
MISSILE QUAL CONT - INSP	560	2	.4	650	6	.9	-13.7	-66.6
SHIPBUILDING QUALITY CONT	264	1	.4	250	1	.4	5.6	.0
SPACE SYSTEM QUALITY CONT	908	2	.2	1,065	2	.2	-14.6	.0
CALIB-MEAS QUAL CON-INSP	676	9	1.3	539	10	1.9	25.4	-9.9
MAT TR PROC QUAL CON-INSP	125	6	4.8	319	7	2.2	-60.7	-14.2
PRES - PKG QUAL CON-INSP	120	6	5.0	127	9	7.1	-5.4	-33.2
AGRI COMMODITY GRADING	2,804	106	3.8	2,767	92	3.3	1.3	15.2
CATEGORY TOTAL	21,227	617	2.9	22,371	688	3.1	-5.0	-10.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

COMMOD QUAL CONT INSP-GR — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY II								
QUALITY INSPECTION	144	2	1.4			.0	*	*
AGRI COMMODITY AID	19	1	5.3	21	3	14.3	-9.4	-66.6
CATEGORY TOTAL	163	3	1.8	21	3	14.3	676.2	.0
CATEGORY I								
AGRI COMMODITY GRADING	1		.0			.0	*	.0
AGRI COMMODITY AID	5		.0	1		.0	400.0	.0
CATEGORY TOTAL	6		.0	1		.0	500.0	.0
OCCUP.GROUP TOTAL	21,396	628	2.9	22,393	691	3.1	-4.4	-10.2

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

SUPPLY GROUP — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL SUPPLY	5,182	840	16.2	5,481	899	16.4	-5.4	-6.5
SUPPLY PROGRAM MANAGEMENT	5,756	806	14.0	5,737	814	14.2	.3	-.9
INVENTORY MANAGEMENT	13,121	4,662	35.5	14,455	5,220	36.1	-9.1	-10.6
DIST FACIL & STOR MGMT	1,340	61	4.6	1,377	60	4.4	-2.6	1.7
PRESERVATION AND PACKING	705	24	3.4	738	25	3.4	-4.4	-3.9
SUPPLY IDENT SYSTEM	3,564	965	27.1	3,792	1,032	27.2	-5.9	-6.4
PROPERTY UTILIZATION	320	63	19.7	354	64	18.1	-9.5	-1.5
SALES STORE CLERICAL	1		.0			.0	*	.0
CATEGORY TOTAL	29,989	7,421	24.7	31,934	8,114	25.4	-6.0	-8.4
CATEGORY II								
GENERAL SUPPLY	4,054	925	22.8	4,546	1,097	24.1	-10.7	-15.6
SUPPLY CLERICAL & TECH	29,625	16,612	56.1	30,372	17,665	58.2	-2.4	-5.9
SALES STORE CLERICAL	610	268	43.9	595	242	40.7	2.5	10.7
CATEGORY TOTAL	34,289	17,805	51.9	35,513	19,004	53.5	-3.3	-6.2
CATEGORY I								
GENERAL SUPPLY	11	3	27.3	22	8	36.4	-49.9	-62.4
SUPPLY CLERICAL & TECH	5,310	2,825	53.2	6,419	3,829	59.0	-18.1	-26.1
SALES STORE CLERICAL	2,522	2,103	83.4	2,217	1,832	82.6	13.8	14.8
CATEGORY TOTAL	7,843	4,931	62.9	8,728	5,669	65.0	-10.0	-12.9
OCCUP.GROUP TOTAL	72,121	30,157	41.8	76,175	32,787	43.0	-5.2	-7.9

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

TRANSPORTATION — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
GENERAL TRANSPORTATION	1,082	105	9.7	1,113	110	9.9	-2.7	-4.4
TRANS RATE AND TARIFF EX	160	9	5.6	166	11	6.6	-3.5	-18.1
HIGHWAY SAFETY MGMT	188	1	.5	133		.0	41.4	*
TRAFFIC MANAGEMENT	1,761	232	13.2	1,847	250	13.5	-4.6	-7.1
TRANSPORTATION OPERATIONS	1,488	63	4.2	1,559	45	2.9	-4.5	40.0
CATEGORY TOTAL	4,679	410	8.8	4,818	416	8.6	-2.8	-1.3
CATEGORY II								
GENERAL TRANSPORTATION	1,016	439	43.2	1,122	523	46.6	-9.3	-16.0
R R SAFETY & SERVICE INSP	134	1	.7	121		.0	10.7	*
FREIGHT RATE	2,232	1,153	51.7	2,392	1,253	52.4	-6.6	-7.9
TRAVEL	1,609	1,339	83.2	1,689	1,415	83.8	-4.6	-5.3
PASSENGER RATE	34	22	64.7	37	25	67.6	-8.0	-11.9
SHIPMENT CLERICAL	2,815	2,181	77.5	2,745	2,149	78.3	2.6	1.5
TRANS LOSS - DAMAGE CL EX	265	164	61.9	271	159	58.7	-2.1	3.1
CARGO SCHEDULING	261	108	41.4	287	116	40.4	-9.0	-6.8
DISPATCHING	710	46	6.8	712	56	7.9	-.2	-14.2
AIR TRAFFIC CONTROL	25,337	326	1.3	21,795	259	1.2	16.3	25.9
MARINE CARGO	267		.0	298	1	.3	-12.0	-100.0
AIRCRAFT OPERATION	2,476	3	.1	2,571	4	.2	-3.6	-24.9
CATEGORY TOTAL	37,151	5,784	15.6	34,040	5,960	17.5	9.1	-2.9
CATEGORY I								
GENERAL TRANSPORTATION	17	12	70.6	18	11	61.1	-5.5	9.1
FREIGHT RATE	1	1	100.0	2	2	100.0	-49.9	-49.9

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FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

TRANSPORTATION — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
TRAVEL	71	66	93.0	64	56	87.5	10.9	17.9
PASSENGER RATE	1		.0			.0	*	.0
SHIPMENT CLERICAL	324	248	76.5	406	312	76.8	-20.1	-20.4
TRANS LOSS - DAMAGE CL EX	2	1	50.0	8	6	75.0	-74.9	-83.2
DISPATCHING	326	64	19.6	423	98	23.2	-22.8	-34.6
CATEGORY TOTAL	742	392	52.8	921	485	52.7	-19.3	-19.1
OCCUP.GROUP TOTAL	42,572	6,586	15.5	39,779	6,861	17.2	7.0	-3.9

FULL-TIME WHITE COLLAR EMPLOYMENT

TABLE F — BY SPECIAL CATEGORIES WITHIN OCCUPATIONAL GROUP

POSTAL GROUP — WORLDWIDE

CATEGORY A/	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	--- WOMEN --- NUMBER	%	TOTAL	WOMEN
CATEGORY III								
POSTMASTER 1 2 3 CLASS	21,473	6,084	27.8	23,195	6,476	27.9	-5.6	-6.0
POSTAL INSPECTION	2,573	320	14.7	2,696	239	11.9	8.3	33.9
CATEGORY TOTAL	24,046	6,404	26.6	25,191	6,715	26.7	-4.4	-4.5
CATEGORY II								
POSTMASTER 4 CLASS OFFICE	6,986	4,799	68.7	7,384	5,033	68.2	-5.3	-4.5
POSTAL ADMINISTRATION	15,319	539	3.5	15,567	553	3.6	-1.5	-2.6
POSTAL COLLECTION & DEL	12,691	123	1.0	12,535	80	.6	1.2	53.8
OTHER POSTAL DISTRIBUTION	25,389	3,143	12.4	24,420	2,260	9.3	4.0	39.1
POSTAL WINDOW & REL SERV	15,915	2,521	15.9	16,098	2,440	15.2	-1.6	3.3
POSTAL TRANSPORTATION	1,984	24	1.2	1,986	23	1.2	-.0	4.3
DISTR WINDOW & MISC CLER	806	40	5.0	651	24	3.7	23.8	66.7
MAIL CLASSIF & SPEC SERV	1,377	93	6.8	1,269	70	5.5	8.5	32.9
SCHEMES & SCHEDULES DEVEL	272	4	1.5	297	5	1.7	-8.3	-19.9
CATEGORY TOTAL	80,039	11,285	14.0	80,195	10,488	13.1	.6	7.6
CATEGORY I								
POSTAL COLLECTION & DEL	191,669	7,830	4.1	190,238	7,334	3.9	.8	6.8
OTHER POSTAL DISTRIBUTION	218,048	55,817	25.6	224,899	57,380	25.5	-2.9	-2.6
RURAL CARRIERS	31,179	681	2.2	30,934	640	2.1	.8	6.4
DISTR WINDOW & MISC CLER	48,177	16,101	33.4	47,430	15,196	32.0	1.6	6.0
MAIL CLASSIF & SPEC SERV	1,054	193	18.3	1,023	163	15.9	3.0	18.4
CATEGORY TOTAL	490,127	80,620	16.5	494,524	80,713	16.3	-.8	-.0
OCCUP.GROUP TOTAL	594,212	98,311	16.5	599,910	97,916	16.3	-.7	.4
GRAND TOTAL B	1,981,722	657,327	33.2	1,990,792	665,294	33.4	-.3	-1.1

A/ CATEGORIES I, II AND III ARE DEFINED IN THE INTRODUCTION.

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FULL-TIME WHITE-COLLAR EMPLOYMENT

BY

OCCUPATIONAL GROUP

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TABLE G FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ALL AGENCIES ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	42,169	1,775	4.2	41,399	1,630	3.9	1.9	8.9
SOC SCI, PSYCH	34,219	9,224	27.0	32,336	9,001	27.8	5.8	2.5
PERS MGMT	40,411	21,514	53.2	41,216	22,219	53.9	-1.9	-3.1
GEN ADMIN	449,057	309,533	68.9	450,363	315,038	70.0	-.2	-1.6
BIOL SCIENCES	41,531	2,641	6.4	40,419	2,481	6.1	2.8	6.4
ACCT AND BUDGET	113,247	53,363	47.1	114,421	54,803	47.9	-.9	-2.5
MED, DENT, PH	93,643	51,854	55.4	91,836	49,995	54.4	2.0	3.7
VETERINARY MED	2,346	28	1.2	2,369	30	1.3	-.9	-6.6
ENG AND ARCH	148,755	1,758	1.2	150,656	1,854	1.2	-1.2	-5.1
LEGAL AND KINDRED	47,779	22,714	47.5	45,336	21,302	46.8	4.9	6.6
INFO AND ARTS	19,573	5,848	29.9	20,337	6,018	29.6	-3.7	-2.7
BUS AND INDUSTRY	64,471	14,025	21.7	65,314	13,945	21.4	-1.2	.6
COPYRIGHT, PAT	1,772	123	6.9	1,762	128	7.3	.6	-3.8
PHYSICAL SCI	42,947	3,964	9.2	44,241	4,186	9.5	-2.8	-5.2
LIBR, ARCHIVE	8,496	5,457	64.2	8,455	5,469	64.7	.5	-.1
MATH AND STAT	13,997	5,828	41.6	14,333	6,308	44.0	-2.2	-7.5
EQUIP, FAC, SVC	18,143	355	2.0	19,879	375	1.9	-8.5	-5.2
EDUCATION	29,291	10,416	35.6	29,338	11,253	38.4	-.2	-7.3
INVESTIGATION	38,935	1,226	3.1	37,325	1,004	2.7	4.3	22.1
COMM QUAL CONT	21,396	620	2.9	22,393	691	3.1	-4.4	-10.2
SUPPLY	72,121	30,157	41.8	76,175	32,787	43.0	-5.2	-7.9
TRANSPORTATION	42,572	6,586	15.5	39,779	6,861	17.2	7.0	-3.9
POSTAL	594,812	98,318	16.5	599,910	97,916	16.3	-.7	.4
TOTAL A/	1,991,723	657,327	33.2	1,989,792	665,294	33.4	-.3	-1.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ARCHITECT OF THE CAPITOL ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	2		.0	1		.0	100.0	.0
PERS MGMT	5	1	20.0	5	1	20.0	.0	.0
GEN ADMIN	72	21	29.2	66	20	30.3	9.1	5.0
BIOL SCIENCES								
ACCT AND BUDGET	13	10	76.9	12	9	75.0	8.3	11.1
MED, DENT, PH	18	9	50.0	18	10	55.6	.0	-9.9
VETERINARY MED								
ENG AND ARCH	18		.0	16		.0	12.5	.0
LEGAL AND KINDRED								
INFO AND ARTS	2		.0	2		.0	.0	.0
BUS AND INDUSTRY	7	2	28.6	12	2	16.7	-41.6	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC	2		.0	2		.0	.0	.0
EDUCATION								
INVESTIGATION	1		.0	1		.0	.0	.0
COMM QUAL CONT								
SUPPLY	7		.0	2		.0	250.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	147	43	29.3	137	42	30.7	7.3	2.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

BOTANIC GARDEN ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT								
GEN ADMIN	3	2	66.7	3	2	66.7	.0	.0
BIOL SCIENCES	2		.0	2		.0	.0	.0
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	5	2	40.0	5	2	40.0	.0	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

LIBRARY OF CONGRESS ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	71	2	2.8	49	2	4.1	85.7	.0
SOC SCI, PSYCH	189	70	37.0	283	104	36.7	-33.1	-32.6
PERS MGMT	29	18	62.1	35	21	60.0	-17.0	-14.2
GEN ADMIN	649	431	66.4	699	462	66.1	-4.2	-6.6
BIOL SCIENCES	15	5	33.3	3		.0	.0	*
ACCT AND BUDGET	109	67	61.5	108	69	63.9	.9	-2.8
MED, DENT, PH VETERINARY MED	5	5	100.0	6	6	100.0	-16.6	-16.6
ENG AND ARCH	10	1	10.0	13	2	15.4	-23.0	-49.9
LEGAL AND KINDRED	47	13	27.7	38	11	28.9	23.7	18.2
INFO AND ARTS	157	109	69.4	97	58	59.8	61.9	87.9
BUS AND INDUSTRY	4	1	25.0	4	1	25.0	.0	.0
COPYRIGHT, PAT	116	65	56.0	123	65	52.8	-5.6	.0
PHYSICAL SCI	20	7	35.0	38	9	23.7	-47.3	-22.1
LIBR, ARCHIVE	2,019	1,054	52.2	2,031	1,057	52.0	-.5	-.2
MATH AND STAT	4	4	100.0	5	3	60.0	-19.9	33.3
EQUIP, FAC, SVC	9	5	55.6	7	4	57.1	28.6	25.0
EDUCATION	21	13	61.9	21	13	61.9	.0	.0
INVESTIGATION COMM QUAL CONT								
SUPPLY	12	1	8.3	17	2	11.8	-29.3	-49.9
TRANSPORTATION POSTAL	7	2	28.6	8	3	37.5	-12.4	-33.2
TOTAL A/	3,533	1,873	53.0	3,585	1,892	52.8	-1.4	-.9

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1046

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

GENERAL ACCOUNTING OFFICE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	5	1	20.0	6	2	33.3	-16.6	-49.9
PERS MGMT	30	18	60.0	34	22	64.7	-11.7	-14.1
GEN ADMIN	1,236	742	60.0	1,051	717	68.2	17.6	3.5
BIOL SCIENCES								
ACCT AND BUDGET	2,632	721	8.4	2,633	238	9.0	.0	-7.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	12		.0	10		.0	20.0	.0
LEGAL AND KINDRED	234	69	29.5	223	64	28.7	4.9	7.8
INFO AND ARTS	35	31	88.6	32	28	87.5	9.4	10.7
ARTS AND INDUSTRY	6	2	33.3	3	1	33.3	100.0	100.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	10	8	80.0	9	7	77.8	11.1	14.3
MATH AND STAT	34	11	32.4	38	12	31.6	-10.4	-8.2
EQUIP, FAC, SVC	2		.0	3		.0	-33.2	.0
EDUCATION								
INVESTIGATION	16		.0	21		.0	-23.7	.0
COMM QUAL CONT								
SUPPLY	22	17	77.3	27	16	59.3	-18.4	6.3
TRANSPORTATION	359	105	29.2	379	118	31.1	-5.2	-10.9
POSTAL								
TOTAL A/	4,633	1,225	26.4	4,469	1,225	27.4	3.7	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1047

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

GOVERNMENT PRINTING OFFICE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	123		.0	115		.0	7.0	.0
SOC SCI, PSYCH								
PERS MGMT	47	23	48.9	45	25	55.6	4.4	-7.9
GEN ADMIN	747	529	70.8	749	521	69.6	-.2	1.5
BIOL SCIENCES								
ACCT AND BUDGET	295	207	70.2	268	192	71.6	10.1	7.8
MED, DENT, PH	11	10	90.9	10	9	90.0	10.0	11.1
VETERINARY MED								
ENG AND ARCH	13		.0	9		.0	44.4	.0
LEGAL AND KINDRED	3	1	33.3	4	2	50.0	-24.9	-49.9
INFO AND ARTS	17	6	35.3	16	2	12.5	6.3	200.0
BUS AND INDUSTRY	53	39	73.6	47	34	72.3	12.8	14.7
COPYRIGHT, PAT								
PHYSICAL SCI	19	1	5.3	19	1	5.3	.0	.0
LIBR, ARCHIVE	19	14	73.7	21	15	71.4	-9.4	-6.6
MATH AND STAT								
EQUIP, FAC, SVC	83	3	3.6	73	2	2.7	13.7	50.0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	54	15	27.8	92	41	44.6	-41.2	-63.3
TRANSPORTATION	11	7	63.6	11	6	54.5	.0	16.7
POSTAL								
TOTAL A/	1,495	855	57.2	1,479	850	57.5	1.1	.6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

2048

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

JUDICIAL BRANCH ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	42	1	2,4	34		,0	,0	*
SOC SCI, PSYCH	7	1	14,3	7	1	14,3	,0	,0
PERS MGMT	9	6	66,7	10	7	70,0	-9,9	-14,2
GEN ADMIN	193	116	63,4	173	110	63,6	5,8	5,5
BIOL SCIENCES								
ACCT AND BUDGET	44	29	65,9	41	26	63,4	7,3	11,5
MED, DENT, PH	2	2	100,0	2	2	100,0	,0	,0
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	6,408	2,551	39,8	6,291	2,507	39,9	1,9	1,8
INFO AND ARTS	2		,0	2		,0	,0	,0
BUS AND INDUSTRY	9	7	77,8	8	6	75,0	12,5	16,7
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	14	11	78,6	13	11	84,6	7,7	,0
MATH AND STAT	3	1	33,3	1	1	100,0	200,0	,0
EQUIP, FAC, SVC	1		,0	1		,0	,0	,0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	4	2	50,0	4	2	50,0	,0	,0
TRANSPORTATION								
POSTAL								
TOTAL A/	6,728	2,727	40,5	6,587	2,673	40,6	2,1	2,0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

7049

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

WHITE HOUSE OFFICE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT	5	3	60.0	3	2	66.7	66.7	50.0
GEN ADMIN	413	223	54.0	287	129	44.9	43.9	72.9
BIOL SCIENCES								
ACCT AND BUDGET	5	1	20.0	4	2	50.0	25.0	-50.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS	8	4	50.0	4	4	100.0	100.0	.0
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	1	1	100.0			.0	*	*
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY	5		.0	5	1	.0	.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	437	232	53.1	303	138	45.5	44.2	68.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1050

TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OFFICE OF MANAGEMENT AND BUDGET — ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1		.0			.0	*	.0
SOC SCI, PSYCH	19	3	15.8	17	2	11.8	11.8	50.0
PERS MGMT	8	4	50.7	4	2	50.0	50.0	100.0
GEN ADMIN	285	174	61.1	247	155	62.8	15.4	12.3
BIOL SCIENCES								
ACCT AND BUDGET	187	8	4.3	184	5	2.7	1.6	60.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	13	5	38.5	15	5	33.3	-13.2	.0
INFO AND ARTS	2	1	50.0	1	1	100.0	100.0	.0
BUS AND INDUSTRY	1	1	100.0	1	1	100.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	14	11	78.6	13	10	76.9	7.7	10.0
MATH AND STAT	32	5	15.6	24	4	16.7	33.3	25.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	3		.0	3		.0	.0	.0
TRANSPORTATION	1	1	100.0			.0	*	*
POSTAL								
TOTAL A/	566	213	37.6	509	189	36.3	10.8	15.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1051

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

COUNCIL OF ECONOMIC ADVISERS ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	19	2	10.5	18	2	11.1	5.6	.0
PERS MGMT								
GEN ADMIN	27	20	74.1	24	16	66.7	12.5	25.0
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT	4	4	100.0	4	4	100.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	50	26	52.0	46	22	47.8	8.7	18.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NATIONAL SECURITY COUNCIL ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP								
SOC SCI, PSYCH	20		,0	17		,0	17,6	,0
PERS MGMT	1	1	100,0	1	1	100,0	,0	,0
GEN ADMIN	42	39	79,0	40	29	72,5	30,0	34,5
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY	1		,0			,0	*	,0
TRANSPORTATION								
POSTAL								
TOTAL A/	74	40	54,1	58	30	51,7	27,6	33,3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1053

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OFF OF ECONOMIC OPPORTUNITY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1		.0	1		.0	.0	.0
SOC SCI, PSYCH	41	13	31.7	51	14	27.5	-19.5	-7.0
PERS MGMT	44	26	39.1	53	27	50.9	20.8	-7.3
GEN ADMIN	2,039	1,111	54.8	1,717	956	55.7	18.2	16.2
BIOL SCIENCES								
ACCT AND BUDGET	161	31	19.3	158	36	22.8	1.9	-13.8
MED, DENT, PH	18	2	11.1	11		.0	.0	*
VETERINARY MED								
ENG AND ARCH	3		.0			.0	*	.0
LEGAL AND KINDRED	46	8	12.1	55	10	18.2	20.0	-19.9
INFO AND ARTS	49	14	28.6	55	23	41.8	-10.8	-39.0
BUS AND INDUSTRY	26	4	15.4	30	10	33.3	-13.7	-59.9
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	5	3	60.0	6	5	83.3	-16.6	-39.9
MATH AND STAT	15	8	53.3	15	8	53.3	.0	.0
EQUIP, FAC, SVC	3	1	33.3			.0	*	*
EDUCATION	13	3	23.1	14	2	14.3	-7.0	50.0
INVESTIGATION	24	1	4.2	19	1	5.3	26.3	.0
COMM DUAL CONT								
SUPPLY	18	1	5.6	20	1	5.0	-9.9	.0
TRANSPORTATION	8	8	100.0	5	5	100.0	60.0	60.0
POSTAL								
TOTAL A/	2,544	1,733	68.5	2,410	1,098	49.7	15.1	17.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OFFICE OF EMERGENCY PREPARED ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	2	1	50.0	3	1	33.3	-33.2	.0
SOC SCI, PSYCH	12	1	8.3	12	1	8.3	.0	.0
PERS MGMT	4	3	75.0	4	4	100.0	.0	-24.9
GEN ADMIN	276	106	40.9	263	128	48.7	-14.0	-17.1
BIOL SCIENCES								
ACCT AND BUDGET	15	3	20.0	11	1	9.1	36.4	200.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	2		.0	9		.0	-77.7	.0
LEGAL AND KINDRED	3		.0	4		.0	-24.9	.0
INFO AND ARTS	5	1	20.0	5		.0	.0	*
BUS AND INDUSTRY	9	1	11.1	13	1	7.7	-30.7	.0
COPYRIGHT, PAT								
PHYSICAL SCI	1		.0	2		.0	-49.9	.0
LIBR, ARCHIVE	2	2	100.0	2	2	100.0	.0	.0
MATH AND STAT	16	1	6.3	19	1	5.3	-15.7	.0
EQUIP, FAC, SVC	1		.0	1		.0	.0	.0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	1		.0	1		.0	.0	.0
TRANSPORTATION	1	1	100.0	1	1	100.0	.0	.0
POSTAL								
TOTAL A/	390	126	40.0	390	140	40.0	-14.2	-14.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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12 OF 33
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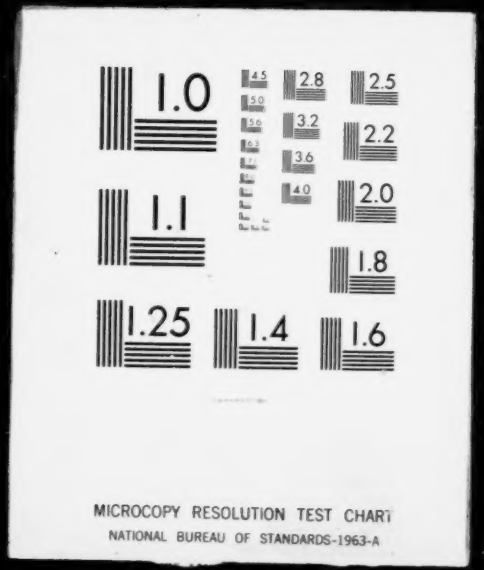

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OFF OF SCIENCE & TECHNOLOGY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	1		.0	1		.0	.0	.0
PERS MGMT								
GEN ADMIN	38	30	78.9	33	25	75.8	15.2	20.0
BIOL SCIENCES								
ACCT AND BUDGET	1	1	100.0	1	1	100.0	.0	.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI	15		.0	13		.0	15.4	.0
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION	1	1	100.0	1	1	100.0	.0	.0
POSTAL								
TOTAL A/	56	32	57.1	49	27	55.1	14.3	18.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OFF SP REP TRADE NEGOTIATIONS ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	8	3	37,5	7	2	28,6	14,3	50,0
PERS MGMT								
GEN ADMIN	15	11	73,3	14	12	85,7	7,1	-8,2
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	1		,0	1		,0	,0	,0
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	24	14	58,3	22	14	63,6	9,1	,0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1057

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

STATE CONSOLIDATED (INCL. AID AND PEACE CORPS) ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	443	6	1,3	520	10	1,9	-10,9	-39,9
SOC SCI, PSYCH	5,068	545	10,8	5,555	624	11,2	-8,7	-12,4
PERS MGMT	649	342	52,7	687	392	57,1	-5,4	-12,7
GEN ADMIN	9,931	5,127	51,6	10,525	5,466	51,9	-5,5	-6,1
BIOL SCIENCES	286	2	,7	303	2	,7	-5,5	,0
ACCT AND BUDGET	1,023	303	29,6	1,016	297	29,2	,7	2,0
MED, DENT, PH	272	93	34,2	370	144	38,9	-26,4	-35,3
VETERINARY MED	4		,0	4		,0	,0	,0
ENG AND ARCH	427	3	,7	481	2	,4	-11,1	50,0
LEGAL AND KINDRED	487	165	33,9	537	189	35,2	-9,2	-12,6
INFO AND ARTS	248	82	33,1	247	95	38,5	,4	-13,6
BUS AND INDUSTRY	376	58	15,4	385	57	14,8	-2,2	1,8
COPYRIGHT, PAT								
PHYSICAL SCI	57		,0	46	1	,0	,0	,0
LIBR, ARCHIVE	41	17	41,5	39	15	38,5	5,1	13,3
MATH AND STAT	45	27	41,5	69	25	36,2	-5,7	8,0
EQUIP, FAC, SVC	93	1	1,2	94		,0	,0	*
EDUCATION	377	116	30,8	296	75	25,3	27,4	54,7
INVESTIGATION	110	1	,9	124		,0	,0	*
COMM QUAL CONT								
SUPPLY	304	27	8,9	314	32	10,2	-3,1	-15,5
TRANSPORTATION	175	47	26,9	192	46	24,0	-8,8	2,2
POSTAL								
TOTAL A/	20,446	6,963	34,1	21,804	7,472	34,3	-6,1	-6,7

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

TREASURY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	1,312	34	2.6	944	25	2.6	39.0	36.0
SOC SCI, PSYCH	143	22	13.5	152	16	10.5	7.2	37.5
PERS MGMT	1,271	719	55.7	1,209	640	52.9	6.8	12.3
GEN ADMIN	26,333	20,453	77.7	25,915	20,006	78.1	2.8	2.2
BIOL SCIENCES	23		.0	20		.0	15.0	.0
ACCT AND BUDGET	31,159	13,024	41.8	30,843	12,971	42.1	1.0	.4
MED, DENT, PH	33	29	87.9	33	30	90.9	.0	-3.2
VETERINARY MED								
ENG AND ARCH	271	1	.4	251		.0	.0	*
LEGAL AND KINDRED	2,959	639	21.6	2,863	620	21.7	3.4	3.1
INFO AND ARTS	147	40	27.2	132	39	29.5	11.4	2.6
BUS AND INDUSTRY	6,141	323	5.3	6,169	304	4.9	-.4	6.3
COPYRIGHT, PAT								
PHYSICAL SCI	255	30	11.8	244	25	10.2	4.5	20.0
LIBR, ARCHIVE	30	22	73.3	29	22	75.9	3.4	.0
MATH AND STAT	318	203	63.8	313	207	66.1	1.6	-1.8
EQUIP, FAC, SVC	65	15	23.1	60	14	23.3	8.3	7.1
EDUCATION	19	3	15.8	15	2	13.3	26.7	50.0
INVESTIGATION	12,591	759	6.0	11,364	610	5.4	10.8	24.4
COMM DUAL CMT								
SUPPLY	398	76	19.1	408	78	19.1	-2.4	-2.5
TRANSPORTATION	7	4	57.1	6	3	50.0	16.7	33.3
POSTAL								
TOTAL A/	93,515	36,395	43.6	80,670	35,612	44.1	3.5	2.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

SECY OF DEF & JT CHIEFS STAFF ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	5		.0	25		.0	-79.9	.0
SOC SCI, PSYCH	13	4	30.8	85	8	9.4	-84.6	-49.9
PERS MGMT	6	4	66.7	49	17	34.7	-87.7	-76.4
GEN ADMIN	324	247	76.2	1,438	1,017	70.7	-77.4	-75.6
BIOL SCIENCES								
ACCT AND BUDGET	1		.0	205	9	.0	.0	.0
MED, DENT, PH			.0	1			-100.0	
VETERINARY MED								
ENG AND ARCH			.0	93			-100.0	
LEGAL AND KINDRED			.0	42	2	4.8	-100.0	-100.0
INFO AND ARTS	11	5	45.5	64	26	40.6	-82.7	-80.7
BUS AND INDUSTRY	1		.0	56		.0	-98.1	.0
COPYRIGHT, PAT								
PHYSICAL SCI			.0	61			-100.0	
LIBR, ARCHIVE	1		.0	1	1	.0	.0	.0
MATH AND STAT	7		.0	103	16	.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION			.0	7	1	14.3	-100.0	-100.0
INVESTIGATION			.0	4			-100.0	
COMM DUAL CONT								
SUPPLY	1		.0	24	1	.0	.0	.0
TRANSPORTATION			.0	9	2	22.2	-100.0	-100.0
POSTAL								
TOTAL A/	370	265	70.3	2,267	1,100	48.5	-83.6	-76.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ARMY (INCL. ATL.-PAC. INTEROCEAN CANAL STUDY COMM.) ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	6,808	227	3.3	7,448	248	3.3	-8.5	-8.4
SOC SCI, PSYCH	2,509	623	24.8	2,687	712	26.5	-6.5	-12.4
PERS MGMT	10,605	6,853	64.6	11,450	7,612	66.5	-7.3	-9.9
GEN ADMIN	88,897	54,191	61.0	93,608	59,802	63.9	-4.9	-9.3
BIOL SCIENCES	1,264	178	14.1	1,432	221	15.4	-11.6	-19.4
ACCT AND BUDGET	18,253	11,308	62.0	19,253	12,075	62.7	-5.1	-6.3
MED, DENT, PH	7,708	5,865	76.1	8,090	6,199	76.6	-4.6	-5.3
VETERINARY MED	11		.0	11		.0	.0	.0
ENG AND ARCH	33,269	487	1.5	35,284	532	1.5	-5.6	-8.4
LEGAL AND KINDRED	1,171	456	38.9	1,306	505	38.7	-10.2	-9.6
INFO AND ARTS	4,734	1,369	28.9	5,076	1,457	28.7	-6.6	-5.9
BUS AND INDUSTRY	11,038	3,174	28.8	12,149	3,556	29.3	-9.0	-10.6
COPYRIGHT, PAT	79	1	1.3	77	2	2.6	2.6	-49.9
PHYSICAL SCI	6,987	637	9.1	7,651	770	10.1	-8.6	-17.2
LIBR, ARCHIVE	1,459	1,160	79.5	1,372	1,115	81.3	6.3	4.0
MATH AND STAT	2,546	883	34.4	2,703	1,036	38.3	-5.0	-14.7
EQUIP, FAC, SVC	5,870	76	1.3	6,802	84	1.2	-13.6	-9.4
EDUCATION	11,215	3,271	29.2	11,499	4,189	36.4	-2.4	-21.8
INVESTIGATION	175	1	.6	389	2	.5	-54.9	-49.9
COMM QUAL CONT	3,393	274	8.1	3,630	258	7.1	-6.7	6.2
SUPPLY	23,251	9,354	40.2	24,788	10,101	40.7	-6.1	-7.3
TRANSPORTATION	5,008	2,119	42.3	5,538	2,350	42.4	-9.5	-9.7
POSTAL								
TOTAL A/	246,250	102,507	41.6	262,243	112,826	43.0	-6.0	-9.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NAVY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	8,874	112	1.3	9,338	106	1.1	-4.7	5.7
SOC SCI, PSYCH	969	171	17.6	973	178	18.3	-.3	-3.8
PERS MGMT	5,895	3,753	63.7	6,092	3,856	63.3	-3.1	-2.6
GEN ADMIN	50,078	36,918	73.7	55,881	41,727	74.7	-10.3	-11.4
BIOL SCIENCES	274	43	15.7	313	59	18.8	-12.4	-27.0
ACCT AND BUDGET	13,072	8,573	65.6	13,492	8,971	66.5	-3.0	-4.3
MED, DENT, PH	2,639	2,236	84.7	2,792	2,367	84.8	-5.4	-5.4
VETERINARY MED	2		.0	2		.0	.0	.0
ENG AND ARCH	38,398	396	1.0	39,603	440	1.1	-3.4	-9.9
LEGAL AND KINDRED	425	172	40.5	418	152	36.4	1.7	13.2
INFO AND ARTS	2,674	808	30.2	2,854	836	29.3	-6.2	-3.2
BUS AND INDUSTRY	8,756	2,426	27.7	8,497	2,132	25.1	3.0	13.8
COPYRIGHT, PAT	98	1	1.1	92	1	1.1	-4.2	.0
PHYSICAL SCI	6,037	340	5.6	6,650	421	6.3	-9.1	-19.1
LIBR, ARCHIVE	837	655	78.3	881	702	79.7	-4.9	-6.6
MATH AND STAT	2,534	682	26.9	2,636	775	29.4	-3.8	-11.9
EQUIP, FAC, SVC	3,934	74	1.9	4,454	86	1.9	-11.6	-13.9
EDUCATION	2,298	719	31.4	2,228	593	26.6	2.7	21.2
INVESTIGATION	991	5	.5	922	2	.2	7.5	150.0
COMM QUAL CONT	2,596	16	.6	2,292	17	.7	12.8	-5.8
SUPPLY	12,636	6,752	53.4	13,895	7,751	55.8	-9.0	-12.8
TRANSPORTATION	2,604	1,371	52.6	2,693	1,358	50.4	-3.2	1.0
POSTAL								
TOTAL A/	166,611	66,223	39.7	177,198	72,530	40.9	-5.9	-8.6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

AIR FORCE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	4,853	92	1.9	5,105	88	1.7	-4.8	4.5
SOC SCI, PSYCH	1,405	356	25.3	1,462	382	26.1	-3.8	-6.7
PERS MGMT	6,031	2,978	49.4	6,283	3,103	49.4	-3.9	-3.9
GEN ADMIN	55,629	38,428	69.1	59,164	41,520	70.2	-5.9	-7.3
BIOL SCIENCES	162	15	9.3	182	21	11.5	-10.9	-28.5
ACCT AND BUDGET	9,603	5,705	59.4	10,179	6,125	60.2	-5.6	-6.8
MED, DENT, PH	2,413	2,048	84.9	2,564	2,183	85.1	-5.8	-6.1
VETERINARY MED	1		.0			.0	*	.0
ENG AND ARCH	15,092	155	1.0	15,700	169	1.1	-3.8	-8.2
LEGAL AND KINDRED	383	163	42.6	409	178	43.5	-6.3	-8.3
INFO AND ARTS	2,711	777	28.7	2,890	852	29.5	-6.1	-8.7
BUS AND INDUSTRY	11,986	2,577	21.5	12,219	2,609	21.4	-1.8	-1.1
COPYRIGHT, PAT	38		.0	42	1	.0	.0	.0
PHYSICAL SCI	3,898	270	6.9	4,099	302	7.4	-5.0	-10.5
LIBR, ARCHIVE	781	603	77.2	841	640	76.1	-7.0	-5.7
MATH AND STAT	1,445	340	23.2	1,563	410	26.2	-6.2	-17.0
EQUIP, FAC, SVC	4,146	40	1.0	4,352	57	1.3	-4.2	-29.7
EDUCATION	5,879	2,144	36.5	6,377	2,449	38.4	-7.7	-12.4
INVESTIGATION	144	1	.7	142	1	.7	1.4	.0
COMM QUAL CONT	3,395	44	1.3	3,517	44	1.3	-3.4	.0
SUPPLY	20,544	8,937	43.5	21,630	9,672	44.7	-4.9	-7.5
TRANSPORTATION	4,908	1,324	27.0	5,010	1,376	27.5	-1.9	-3.7
POSTAL								
TOTAL A/	155,477	66,992	43.1	163,730	72,182	44.1	-4.7	-7.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE 4 FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OTHER DEFENSE ACTIVITIES (INCL. DEFENSE SUPPLY AGENCY) ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1,078	89	8.3	1,081	104	9.6	-.2	-14.3
SOC SCI, PSYCH	1,446	353	24.1	1,536	393	25.6	-4.5	-10.1
PERS MGMT	828	422	51.0	845	447	52.9	-1.9	-5.5
GEN ADMIN	16,593	11,217	67.6	16,811	11,580	68.9	-1.2	3.0
BIOL SCIENCES	55	5	9.1	53	7	13.2	3.8	-28.5
ACCT AND BUDGET	6,422	2,355	36.7	6,509	2,522	38.7	-1.2	-6.5
MED, DENT, PH VETERINARY MED	21	11	52.4	67	58	86.6	-68.6	-80.9
ENG AND ARCH	1,414	12	.8	1,359	13	1.0	4.0	-7.6
LEGAL AND KINDRED	169	19	11.2	143	18	12.6	18.2	5.6
INFO AND ARTS	618	188	30.4	580	178	30.7	6.6	5.6
BUS AND INDUSTRY	7,091	2,052	28.9	7,680	2,253	29.3	-7.6	-8.8
COPYRIGHT, PAT	1		.0	1		.0	.0	.0
PHYSICAL SCI	443	55	11.9	438	62	14.2	5.7	-11.2
LIBR, ARCHIVE	299	128	61.2	224	146	65.2	-6.6	-12.2
MATH AND STAT	320	128	40.0	253	122	48.2	26.5	4.9
EQUIP, FAC, SVC	799	12	1.5	866	14	1.6	-7.6	-14.2
EDUCATION	49	13	26.5	42	13	31.0	16.7	.0
INVESTIGATION	9		.0	9		.0	.0	.0
COMM QUAL CONT	7,589	168	2.2	8,550	268	3.1	-11.1	-37.2
SUPPLY	5,857	2,739	46.8	6,156	2,945	47.8	-4.8	-6.9
TRANSPORTATION POSTAL	1,029	675	65.6	1,091	722	66.2	-5.6	-6.4
TOTAL A/	52,090	20,641	39.6	54,294	21,865	40.3	-4.0	-5.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

JUSTICE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	5,832	882	15.1	5,061	795	15.7	15.2	10.9
SOC SCI, PSYCH	349	69	19.8	315	54	17.1	10.8	27.8
PERS MGMT	331	197	59.5	304	171	56.3	8.9	15.2
GEN ADMIN	13,823	10,328	74.7	12,224	9,458	77.4	13.1	9.2
BIOL SCIENCES	21	5	23.8	20	2	10.0	5.0	150.0
ACCT AND BUDGET	693	389	56.1	558	348	62.4	24.2	11.8
MED, DENT, PH VETERINARY MED	33	26	78.8	28	23	82.1	17.9	13.0
ENG AND ARCH	227	1	.4	208		.0	.0	*
LEGAL AND KINDRED	3,373	905	26.8	2,959	783	26.5	14.0	15.6
INFO AND ARTS	247	75	30.4	229	71	31.0	7.9	5.6
BUS AND INDUSTRY	148	15	10.1	124	10	8.1	19.4	50.0
COPYRIGHT, PAT	15	1	6.7	14	1	7.1	7.1	.0
PHYSICAL SCI	155	33	21.3	123	39	31.7	26.0	-15.3
LIBR, ARCHIVE	37	19	51.4	35	17	48.6	5.7	11.8
MATH AND STAT	149	85	50.3	121	70	57.9	39.7	21.4
EQUIP, FAC, SVC	66	2	3.0	64	2	3.1	3.1	.0
EDUCATION	252	25	9.9	227	24	10.6	11.0	4.2
INVESTIGATION	11,889	63	.5	11,550	53	.5	2.9	18.9
COMM DUAL CONT	9		.0	8		.0	12.5	.0
SUPPLY	151	15	9.9	140	16	11.4	7.9	-6.2
TRANSPORTATION	55	3	5.5	53	2	3.8	3.8	50.0
POSTAL								
TOTAL A/	37,875	13,138	34.7	34,365	11,939	34.7	10.2	10.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

POST OFFICE — ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1,874	50	2.7	1,662	20	1.2	12.8	150.0
SOC SCI, PSYCH	70	4	5.7	41	5	12.2	70.7	-19.9
PERS MGMT	3,436	835	24.3	3,381	789	23.3	1.6	6.0
GEN ADMIN	10,149	4,054	39.9	8,734	3,766	43.1	16.2	7.6
BIOL SCIENCES								
ACCT AND BUDGET	5,508	992	18.0	5,885	985	16.7	-6.3	.7
MED, DENT, PH	347	281	81.0	292	240	82.2	18.8	17.1
VETERINARY MED								
ENG AND ARCH	894	8	.9	715	6	.8	23.6	33.3
LEGAL AND KINDRED	96	11	11.5	75	7	9.3	28.0	57.1
INFO AND ARTS	145	11	7.6	123	10	8.1	17.9	10.0
BUS AND INDUSTRY	595	88	17.4	464	72	15.5	8.8	22.2
COPYRIGHT, PAT	1		.0			.0	*	.0
PHYSICAL SCI	30	2	6.7	22	1	4.5	36.4	100.0
LIBR, ARCHIVE	13	11	84.6	10	8	80.0	30.0	37.5
MATH AND STAT	72	25	34.7	56	20	35.7	28.6	25.0
EQUIP, FAC, SVC	794	5	.6	749	6	.8	4.7	-16.6
EDUCATION	577	33	5.7	533	26	4.9	8.3	26.9
INVESTIGATION	79	8	10.1	77	11	14.3	2.6	-27.2
COMM DUAL CONT	18		.0	19		.0	-5.2	.0
SUPPLY	599	23	4.5	469	27	5.8	8.5	-14.7
TRANSPORTATION	958	3	.3	925	3	.3	3.6	.0
POSTAL	594,810	98,318	16.5	599,908	97,916	16.3	-.7	.4
TOTAL A/	630,845	104,763	16.9	624,140	103,918	16.6	-.4	.8

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

INTERIOR (INCL. EXEC. MANSION AND GROUNDS) ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	2,550	174	6.8	1,862	94	5.0	36.9	85.1
SOC SCI, PSYCH	694	157	23.0	832	185	22.2	-17.7	-15.0
PERS MGMT	891	475	53.3	853	458	53.7	3.3	2.6
GEN ADMIN	13,151	8,955	68.1	13,441	8,872	66.0	2.1	.9
BIOL SCIENCES	5,259	82	1.6	5,772	133	2.3	-8.8	-38.2
ACCT AND BUDGET	1,657	890	53.7	1,725	921	53.4	-3.8	-3.3
MED, DENT, PH	30	18	60.0	37	23	62.2	-18.8	-21.6
VETERINARY MED	3		.0	4		.0	-24.9	.0
ENG AND ARCH	10,744	208	1.9	10,835	213	2.0	-.7	-2.2
LEGAL AND KINDRED	747	365	48.9	729	375	51.4	2.5	-2.6
INFO AND ARTS	723	272	37.6	740	282	38.1	-2.2	-3.4
BUS AND INDUSTRY	1,401	289	20.6	1,525	271	17.8	-8.0	6.6
COPYRIGHT, PAT	8		.0	9		.0	-11.0	.0
PHYSICAL SCI	5,510	485	8.8	5,574	512	9.2	-1.0	-5.2
LIBR, ARCHIVE	192	144	75.0	190	147	75.0	1.9	-1.9
MATH AND STAT	336	181	53.9	396	231	58.3	-15.1	-21.5
EQUIP, FAC, SVC	346	6	1.7	362	6	1.7	-4.3	.0
EDUCATION	5,771	3,219	55.8	5,427	3,012	55.5	6.3	6.9
INVESTIGATION	770		.0	822	1	.0	.0	.0
COMM QUAL CONT	18		.0	26		.0	-30.7	.0
SUPPLY	746	127	17.0	802	136	17.0	-6.9	-6.5
TRANSPORTATION	69	19	27.5	81	14	23.0	13.1	35.7
POSTAL								
TOTAL A/	51,896	16,061	31.1	51,830	15,886	30.7	-.4	1.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

AGRICULTURE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	355	13	3.7	360	12	3.3	-1.3	8.3
SOC SCI, PSYCH	1,343	69	5.1	1,169	60	5.1	14.9	15.0
PERS MGMT	1,217	734	60.3	1,160	711	61.3	4.9	3.2
GEN ADMIN	19,557	14,303	73.1	19,752	14,223	72.0	-.9	.6
BIOL SCIENCES	29,154	791	2.7	28,477	700	2.5	3.1	13.0
ACCT AND BUDGET	3,894	1,879	48.3	3,783	1,816	48.0	2.9	3.5
MED, DENT, PH	66	18	27.3	69	24	34.8	-4.2	-24.9
VETERINARY MED	2,143	26	1.2	2,191	27	1.2	-1.2	-3.6
ENG AND ARCH	7,846	95	1.2	7,953	98	1.3	3.9	-3.0
LEGAL AND KINDRED	593	317	53.5	575	308	53.6	3.1	2.9
INFO AND ARTS	813	247	30.4	814	252	31.0	-.0	-1.9
BUS AND INDUSTRY	2,184	313	14.3	1,983	273	13.8	10.1	14.7
COPYRIGHT, PAT	8		.0	8		.0	.0	.0
PHYSICAL SCI	2,779	506	18.2	2,735	516	18.9	1.6	-1.8
LIBR, ARCHIVE	183	111	60.7	186	117	62.9	-1.5	-5.0
MATH AND STAT	1,344	699	52.0	1,377	767	55.7	-2.3	-8.8
EQUIP, FAC, SVC	212	14	6.6	233	11	4.7	-8.9	27.3
EDUCATION	343	19	5.2	343	17	5.0	5.8	11.8
INVESTIGATION	7,098	265	3.8	6,850	200	3.0	5.4	32.5
COMM QUAL CONT	2,858	109	3.8	2,818	97	3.4	1.4	12.4
SUPPLY	396	88	22.2	383	92	24.0	3.4	-4.2
TRANSPORTATION	218	40	18.3	216	42	19.4	.9	-4.7
POSTAL								
TOTAL A/	84,554	20,656	24.4	82,635	20,363	24.6	2.3	1.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

COMMERCE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	93	4	4.3	85	2	2.4	9.4	100.0
SOC SCI, PSYCH	605	153	25.3	540	144	26.7	12.0	6.3
PERS MGMT	377	192	50.9	343	172	50.1	9.9	11.6
GEN ADMIN	12,350	8,893	72.0	8,707	5,901	67.8	41.8	50.7
BIOL SCIENCES	706	73	10.3	3	2	66.7	*	*
ACCT AND BUDGET	848	397	46.8	770	345	44.8	10.1	15.1
MED, DENT, PH	30	21	70.0	28	18	64.3	7.1	16.7
VETERINARY MED	1		.0			.0	*	.0
ENG AND ARCH	2,272	14	.6	2,153	9	.4	5.5	55.6
LEGAL AND KINDRED	366	181	49.5	384	189	49.2	-4.6	-4.1
INFO AND ARTS	464	191	41.2	384	143	37.2	20.8	33.6
BUS AND INDUSTRY	944	153	16.2	815	137	16.8	15.8	11.7
COPYRIGHT, PAT	1,342	55	4.1	1,317	57	4.3	1.9	-3.4
PHYSICAL SCI	7,214	453	6.3	6,886	426	6.2	4.8	6.3
LIBR, ARCHIVE	296	141	62.4	192	118	61.5	17.7	19.5
MATH AND STAT	1,785	829	46.4	1,686	815	48.3	5.9	1.7
EQUIP, FAC, SVC	84	11	13.1	78	13	16.7	7.7	-15.3
EDUCATION	123	6	4.9	112	3	2.7	9.8	100.0
INVESTIGATION	102	1	1.0	30	1	3.3	240.0	.0
COMM QUAL CONT	5		.0	5		.0	.0	.0
SUPPLY	296	63	22.0	272	58	21.3	5.1	8.6
TRANSPORTATION	85	26	30.6	81	24	29.6	4.9	8.3
POSTAL								
TOTAL A/	30,308	11,857	39.1	24,871	8,577	34.5	21.9	38.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

LABOR ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1949			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	19		.0	15		.0	26.7	.0
SOC SCI, PSYCH	2,030	520	25.7	1,702	441	25.9	18.7	17.9
PERS MGMT	746	223	29.9	877	261	29.8	-14.8	-14.5
GEN ADMIN	4,730	3,223	68.1	4,283	3,037	70.9	10.4	6.1
BIOL SCIENCES								
ACCT AND BUDGET	444	183	41.2	435	205	47.1	2.1	-10.6
MED, DENT, PH	16	2	12.5	12	3	25.0	33.3	-33.2
VETERINARY MED								
ENG AND ARCH	74		.0	86	10	.0	.0	.0
LEGAL AND KINDRED	390	95	25.0	380	80	21.1	.0	18.8
INFO AND ARTS	137	71	51.8	134	71	53.0	2.2	.0
BUS AND INDUSTRY	143	42	29.4	138	34	24.6	3.6	23.5
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	32	25	78.1	28	21	75.0	14.3	19.0
MATH AND STAT	480	343	71.5	491	345	70.3	-2.1	-.5
EQUIP, FAC, SVC	9	4	44.4	7	4	57.1	28.6	.0
EDUCATION	46	10	21.7	52	14	26.9	-11.4	-28.5
INVESTIGATION	1,148	72	6.3	1,394	70	5.0	-17.5	2.9
COMM QUAL CONT								
SUPPLY	56	7	12.5	62	8	12.9	-9.6	-12.4
TRANSPORTATION	35	17	48.6	40	22	55.0	-12.4	-22.6
POSTAL								
TOTAL A/	10,515	4,937	46.0	10,130	4,626	45.6	3.7	4.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1970

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

HEALTH EDUCATION & WELFARE ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	334	20	6.0	390	57	14.6	-14.3	-64.8
SOC SCI, PSYCH	12,136	4,553	37.5	9,937	4,175	42.0	22.1	9.1
PERS MGMT	1,276	730	57.2	1,156	677	58.6	10.4	7.8
GEN ADMIN	38,321	29,238	76.3	33,449	25,859	77.3	14.6	13.1
BIOL SCIENCES	2,755	922	33.5	2,476	818	33.0	11.3	12.7
ACCT AND BUDGET	2,993	1,311	43.8	2,650	1,227	46.3	12.9	6.8
MED, DENT, PH	15,246	6,813	44.7	14,217	5,982	42.1	7.2	13.9
VETERINARY MED	148	2	1.4	144	3	2.1	2.8	-33.2
ENG AND ARCH	1,487	17	1.1	1,351	15	1.1	10.1	13.3
LEGAL AND KINDRED	18,178	13,379	73.6	16,622	12,290	73.9	9.1	8.9
INFO AND ARTS	940	438	46.6	961	436	45.4	-2.1	.5
BUS AND INDUSTRY	812	347	42.7	655	258	39.4	24.0	34.5
COPYRIGHT, PAT	1		.0	1		.0	.0	.0
PHYSICAL SCI	2,459	562	22.9	2,348	500	21.3	4.7	12.4
LIBR, ARCHIVE	494	323	65.4	423	280	66.2	15.8	15.4
MATH AND STAT	1,232	666	54.1	1,188	662	55.7	3.7	.6
EQUIP, FAC, SVC	171	23	13.5	164	15	9.1	4.3	53.3
EDUCATION	1,232	368	29.9	1,111	352	31.7	10.9	4.5
INVESTIGATION	409	16	3.9	445	15	3.4	-8.0	6.7
CLAM DUAL CONT	12	2	16.7	12	2	16.7	.0	.0
SUPPLY	558	135	24.4	499	112	22.4	11.8	21.4
TRANSPORTATION	101	80	79.2	107	86	80.4	-5.5	-6.9
POSTAL								
TOTAL A/	101,245	59,345	59.2	90,206	53,821	59.6	12.1	11.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

HOUSING AND URBAN DEVELOPMENT ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	124	13	10.5	125	10	8.0	-.7	30.0
SOC SCI, PSYCH	277	62	22.4	265	80	30.2	4.5	-22.4
PERS MGMT	215	114	53.0	193	90	46.6	11.4	26.7
GEN ADMIN	7,059	4,872	69.0	6,793	4,632	68.2	3.9	5.2
BIOL SCIENCES								
ACCT AND BUDGET	1,199	477	39.8	1,200	465	38.8	-.0	2.6
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	1,853	13	.7	1,829	9	.5	1.3	44.4
LEGAL AND KINDRED	404	115	28.5	401	120	29.9	.7	-4.1
INFO AND ARTS	82	33	40.2	80	37	46.3	2.5	-10.7
BUS AND INDUSTRY	3,422	278	8.1	3,146	229	7.3	8.8	21.4
COPYRIGHT, PAT								
PHYSICAL SCI	8		.0	8		.0	.0	.0
LIBR, ARCHIVE	34	29	85.3	31	26	83.9	9.7	11.5
MATH AND STAT	122	85	69.7	116	81	69.8	5.2	4.9
EQUIP, FAC, SVC	12	6	50.0	20	6	30.0	-39.9	.0
EDUCATION								
INVESTIGATION	35		.0	37		.0	-5.3	.0
COMM QUAL CONT								
SUPPLY	38	8	21.1	41	5	12.2	-7.2	60.0
TRANSPORTATION	3	2	66.7	4	3	75.0	-24.9	-33.2
POSTAL								
TOTAL A/	14,897	6,107	41.0	14,289	5,793	40.5	4.2	5.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

A1.72

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

TRANSPORTATION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	390	10	2.6	378	12	3.2	3.2	-16.6
SOC SCI, PSYCH	172	31	18.0	146	23	15.8	17.8	34.8
PERS MGMT	847	432	51.0	797	386	48.4	6.3	11.9
GEN ADMIN	10,592	6,952	65.6	10,085	6,672	66.2	5.0	4.2
BIOL SCIENCES	31	6	19.4	30	7	23.3	3.3	-14.2
ACCT AND BUDGET	1,854	867	46.8	1,752	813	46.4	5.8	6.6
MED, DENT, PH	89	35	39.3	79	32	40.5	12.7	9.4
VETERINARY MED	1		.0	1		.0	.0	.0
ENG AND ARCH	14,598	57	.4	13,673	56	.4	6.8	1.8
LEGAL AND KINDRED	437	162	37.1	409	151	36.9	6.8	7.3
INFO AND ARTS	258	56	21.7	251	56	22.3	2.8	.0
BUS AND INDUSTRY	909	228	25.1	850	192	22.6	6.9	18.8
COPYRIGHT, PAT	3		.0	3	1	.0	.0	.0
PHYSICAL SCI	279	26	9.3	197	20	10.2	41.6	30.0
LIBR, ARCHIVE	90	65	72.2	88	62	70.5	2.3	4.8
MATH AND STAT	224	90	40.2	210	83	39.5	6.7	8.4
EQUIP, FAC, SVC	224	9	4.0	232	6	2.6	-3.3	50.0
EDUCATION	77	19	24.7	65	15	23.1	18.5	26.7
INVESTIGATION	2,397	31	1.3	2,313	24	1.0	3.6	29.2
COMM QUAL CONT	198		.0	182		.0	8.8	.0
SUPPLY	971	241	24.8	943	246	26.1	3.0	-1.9
TRANSPORTATION	25,508	354	1.4	21,806	285	1.3	17.0	24.2
POSTAL								
TOTAL A/	60,149	9,571	16.1	54,490	9,142	16.8	10.4	5.8

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

2073

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ADVIS COMM IN INTERGOVT RELAT ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT								
GEN ADMIN	27	10	37,0	32	15	46,9	-15,5	-33,2
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS	1	1	100,0			,0	*	*
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	1		,0	1	1	,0	,0	,0
MATH AND STAT	1		,0	2	1	,0	,0	,0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	30	11	36,7	35	17	48,6	-14,2	-35,2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1C74

TABLE 1 FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ARMY BATTLE MONUMENTS COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC CLER								
SEC SCI & PSYCH								
PERS MGMT	1		.0	1		.0	.0	.0
GEN ADMIN	6	4	66.7	9	4	44.4	-33.2	.0
BIOL SCIENCES								
ACCT & BUDGET	1	1	100.0	1	1	100.0	.0	.0
MED OFFR, PA								
VETERINARY MED								
ENG & ARCH	1		.0	1		.0	.0	.0
LEGAL & KINDRED								
INFO & ARTS								
BUS & INDUSTRY	1		.0	1		.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIV								
MATH & STAT								
EQUIP, FAC, SVC	31		.0	30		.0	3.3	.0
EDUCATION								
INVESTIGATION								
COMM QUAL CHAT				1				
SUPPLY	2		.0	1		.0	100.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	43	5	11.6	44	5	11.4	-2.2	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1075

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ARMS CONTROL & DISARM AGENCY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1		.0	1		.0	.0	.0
SOC SCI, PSYCH	28	5	17.9	31	5	16.1	-9.6	.0
PERS MGMT	1	1	100.0			.0	*	*
GEN ADMIN	96	72	83.7	91	77	84.6	-5.4	-6.4
BIOL SCIENCES								
ACCT AND BUDGET	2	1	50.0	1		.0	.0	*
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	5		.0	2		.0	150.0	.0
LEGAL AND KINDRED	2		.0	3		.0	-33.2	.0
INFO AND ARTS	3	1	33.3	1	1	100.0	200.0	.0
BUS AND INDUSTRY	5	2	40.0	4	2	50.0	25.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI	21		.0	18		.0	16.7	.0
LIBR, ARCHIVE	4	3	75.0	6	5	83.3	-33.2	-39.9
MATH AND STAT	3		.0	4		.0	-24.9	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	141	85	52.8	162	90	55.6	-.5	-5.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1276

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

ATOMIC ENERGY COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	647	17	2,5	692	18	2,6	-3,5	-5,5
SOC SCI, PSYCH	35	2	5,7	36	4	11,1	-2,7	-49,9
PERS MGMT	130	41	31,5	143	43	30,1	-9,0	- 4,6
GEN ADMIN	2,513	1,802	71,7	2,563	1,855	72,4	-1,9	- 2,8
BIOL SCIENCES	25		,0	26		,0	-3,7	,0
ACCT AND BUDGET	676	161	23,8	672	159	23,7	,6	1,3
MED, DENT, PH VETERINARY MED	26	8	30,8	27	8	29,6	-3,6	,0
ENG AND ARCH	1,199	6	,5	1,202	4	,3	-1,0	50,0
LEGAL AND KINDRED	117	9	7,7	118	9	7,6	- ,7	,0
INFO AND ARTS	137	40	29,2	142	44	31,0	-3,4	-9,0
BUS AND INDUSTRY	297	30	10,1	308	33	10,7	-3,5	-9,0
COPYRIGHT, PAT	39		,0	39		,0	,0	,0
PHYSICAL SCI	598	25	4,2	603	24	4,0	- ,7	4,2
LIBR, ARCHIVE	77	52	67,5	73	52	71,2	5,5	,0
MATH AND STAT	45	13	28,9	42	13	31,0	7,1	,0
EQUIP, FAC, SVC	19	1	5,3	20	2	10,0	-4,9	-49,9
EDUCATION	8	1	12,5	10	1	10,0	-19,9	,0
INVESTIGATION	60		,0	68	1	,0	,0	,0
COMM DUAL CONT	202	1	,5	191		,0	,0	*
SUPPLY	49	3	6,1	57	3	5,3	-13,9	,0
TRANSPORTATION POSTAL	30	10	33,3	35	13	37,1	-14,2	-23,0
TOTAL A/	6,939	2,222	32,0	7,067	2,286	32,3	- 1,7	- 2,7

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1077

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

CANAL ZONE GOVERNMENT ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	258		.0	256		.0	.8	.0
SOC SCI, PSYCH	32	22	68.8	34	24	70.6	-5.8	-8.2
PERS MGMT	2	2	100.0	4	4	100.0	-49.9	-49.9
GEN ADMIN	162	104	64.2	159	102	64.2	1.9	2.0
BIOL SCIENCES	1		.0	1		.0	.0	.0
ACCT AND BUDGET	38	13	34.2	45	18	40.0	-15.5	-27.7
MED, DENT, PH	359	238	66.3	353	240	68.0	1.7	- .7
VETERINARY MED	6		.0	6		.0	.0	.0
ENG AND ARCH	1		.0	1		.0	.0	.0
LEGAL AND KINDRED	6		.0	7		.0	-14.2	.0
INFO AND ARTS	2	2	100.0	2	2	100.0	.0	.0
BUS AND INDUSTRY	3	1	33.3	3	1	33.3	.0	.0
COPYRIGHT, PAT PHYSICAL SCI								
LIBR, ARCHIVE MATH AND STAT	15	14	93.3	14	13	92.9	7.1	7.7
EQUIP, FAC, SVC	1	1	100.0			.0	*	*
EDUCATION	596	387	64.9	612	405	66.2	-2.5	-4.3
INVESTIGATION	46		.0	53		.0	13.1	.0
COMM QUAL CONT								
SUPPLY	2	1	50.0	1	1	100.0	100.0	.0
TRANSPORTATION								
POSTAL	2		.0	2		.0	.0	.0
TOTAL A/	1,532	785	51.2	1,553	810	52.2	-1.3	-3.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1078

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

CIVIL AERONAUTICS BOARD ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	54	5	9,3	47	4	8,5	14,9	25,0
PERS MGMT	4	2	50,0	5	2	40,0	-19,9	,0
GEN ADMIN	241	186	77,2	229	177	77,3	5,2	5,1
BIOL SCIENCES								
ACCT AND BUDGET	79	12	15,2	77	9	11,7	2,6	33,3
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	104	11	10,6	98	14	14,3	6,1	-21,3
INFO AND ARTS	6	2	33,3	6	3	50,0	,0	-33,2
BUS AND INDUSTRY	135	19	14,1	130	20	15,4	3,8	- 4,9
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	3	2	66,7	3	2	66,7	,0	,0
MATH AND STAT	20	10	50,0	17	8	47,1	17,6	25,0
EQUIP, FAC, SVC	1	1	100,0	1	1	100,0	,0	,0
EDUCATION								
INVESTIGATION	1		,0			,0	*	,0
COMM DUAL CONT								
SUPPLY	2	1	50,0	6	2	33,3	-66,6	-49,9
TRANSPORTATION	10	6	60,0	10	6	60,0	,0	,0
POSTAL								
TOTAL A/	660	257	38,9	629	248	39,4	4,9	3,6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

1079

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

CIVIL SERVICE COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	3		.0	3		.0	.0	.0
SOC SCI, PSYCH	28	7	25.0	25	10	40.0	12.0	-29.9
PERS MGMT	1,962	949	48.4	1,746	866	49.6	12.4	9.6
GEN ADMIN	2,084	1,687	81.0	1,871	1,517	81.1	11.4	11.2
BIOL SCIENCES								
ACCT AND BUDGET	211	130	61.6	227	140	61.7	-6.9	-7.0
MED, DENT, PH	16	4	25.0	15	4	26.7	6.7	.0
VETERINARY MED								
ENG AND ARCH			.0	1			-100.0	
LEGAL AND KINDRED	221	104	47.1	177	87	49.2	24.9	19.5
INFO AND ARTS	24	10	41.7	23	10	43.5	4.3	.0
BUS AND INDUSTRY	3		.0	3		.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	13	12	92.3	13	10	76.9	.0	20.0
MATH AND STAT	26	14	53.8	25	15	60.0	4.0	-6.6
EQUIP, FAC, SVC	5	2	40.0	4	1	25.0	25.0	100.0
EDUCATION	4		.0	5		.0	-19.9	.0
INVESTIGATION	582	1	.2	688	9	1.3	-15.3	-88.8
COMM QUAL CONT								
SUPPLY	42	7	16.7	43	10	23.3	-2.2	-29.9
TRANSPORTATION	1		.0	1		.0	.0	.0
POSTAL								
TOTAL A/	5,225	2,927	56.0	4,870	2,679	55.0	7.3	9.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

COMMISSION ON CIVIL RIGHTS ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	10	3	30.0	10	3	30.0	.0	.0
PERS MGMT	3	2	66.7	3	2	66.7	.0	.0
GEN ADMIN	104	66	63.5	98	65	66.3	6.1	1.5
BIOL SCIENCES								
ACCT AND BUDGET	4	2	50.0	2	1	50.0	100.0	100.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	20	4	20.0	17	3	17.6	17.6	33.3
INFO AND ARTS	8	4	50.0	6	4	66.7	33.3	.0
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	3	3	100.0	6	6	100.0	-49.9	-49.9
MATH AND STAT	2	2	100.0	2	2	100.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	154	86	55.8	144	86	59.7	6.9	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

EQUAL EMPLOY OPPORTUNITY COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	10	6	60.0	7	5	71.4	42.9	20.0
PERS MGMT	15	12	80.0	9	5	55.6	66.7	140.0
GEN ADMIN	649	300	46.2	492	258	52.4	31.9	16.3
BIOL SCIENCES								
ACCT AND BUDGET	7	2	28.6	5	1	20.0	40.0	100.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	1	1	100.0			.0	*	*
LEGAL AND KINDRED	46	13	28.3	34	11	32.4	35.3	18.2
EDUC AND ARTS	8	5	62.5	4	3	75.0	100.0	66.7
BUS AND INDUSTRY	1		.0	1		.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	3	3	100.0	2	2	100.0	50.0	50.0
MATH AND STAT	5	3	60.0	2	1	50.0	150.0	200.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY	3		.0			.0	*	.0
TRANSPORTATION	1		.0			.0	*	.0
POSTAL								
TOTAL A/	749	345	46.1	556	288	51.4	34.7	20.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

EXPORT-IMPORT BANK ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	37	5	13.5	31	3	9.7	19.4	66.7
PERS MGMT	4	3	75.0	4	3	75.0	.0	.0
GEN ADMIN	192	142	74.0	157	120	76.4	15.9	18.3
BIOL SCIENCES								
ACCT AND BUDGET	44	19	43.2	47	25	53.2	-6.3	-23.9
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	8		.0	8		.0	.0	.0
LEGAL AND KINDRED	15		.0	10		.0	50.0	.0
INFO AND ARTS	4	2	50.0	4	3	75.0	.0	-33.2
BUS AND INDUSTRY	56	7	12.5	53	5	9.4	5.7	40.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	2	2	100.0	2	2	100.0	.0	.0
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY	1		.0			.0	*	.0
TRANSPORTATION	1	1	100.0			.0	*	*
POSTAL								
TOTAL A/	364	181	51.1	316	161	50.9	12.0	12.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FARM CREDIT ADMINISTRATION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	4		.0	3		.0	33.3	.0
PERS MGMT	2	2	100.0	2	2	100.0	.0	.0
GEN ADMIN	114	53	46.5	111	50	45.0	2.7	6.0
BIOL SCIENCES								
ACCT AND BUDGET	79	22	27.8	81	22	27.2	-2.4	.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	2		.0	2		.0	.0	.0
INFO AND ARTS	5	2	40.0	3	1	33.3	66.7	100.0
BUS AND INDUSTRY	4		.0	4		.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT	2	1	50.0	2	1	50.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	1		.0	1		.0	.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	213	80	37.6	209	76	36.4	1.9	5.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FEDERAL COMMUNICATIONS COMM — ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	1		.0	1		.0	.0	.0
SOC SCI, PSYCH	23	5	21.7	23	9	39.1	.0	-44.3
PERS MGMT	20	10	50.0	16	9	56.3	25.0	11.1
GEN ADMIN	522	389	74.3	498	377	75.7	4.8	2.9
BIOL SCIENCES								
ACCT AND BUDGET	41	27	44.3	63	25	39.7	-3.1	8.0
MED, DENT, PH	1	1	100.0	1	1	100.0	.0	.0
VETERINARY MED								
ENG AND ARCH	451		.0	445		.0	1.3	.0
LEGAL AND KINDRED	357	133	37.3	375	142	37.9	-4.7	-6.2
INFO AND ARTS	18	12	66.7	15	9	60.0	20.0	33.3
BUS AND INDUSTRY	17	2	11.8	12	1	8.3	41.7	100.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	4	4	100.0	6	5	83.3	-33.2	-19.9
MATH AND STAT	6	6	100.0	7	7	100.0	-14.2	-14.2
EQUIP, FAC, SVC	2		.0	2		.0	.0	.0
EDUCATION								
INVESTIGATION	4		.0	3		.0	33.3	.0
COMM QUAL CONT								
SUPPLY	4		.0	3		.0	33.3	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	1,491	588	39.4	1,470	585	39.8	1.4	.5

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FED DEPOSIT INSURANCE CORP ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	20	2	10.0	22	3	13.6	-9.1	-33.3
PERS MGMT	9	5	55.6	8	4	50.0	12.5	25.0
GEN ADMIN	579	415	78.4	585	425	79.4	-1.0	-2.4
BIOL SCIENCES								
ACCT AND BUDGET	1,659	123	7.4	1,462	105	7.2	13.5	17.1
MED, DENT, PH	1	1	100.0	1	1	100.0	.0	.0
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	26	2	7.7	27	2	7.4	-3.5	.0
INFO AND ARTS	11	8	72.7	8	5	62.5	37.5	60.0
BUS AND INDUSTRY	78	5	6.4	71	5	7.0	9.9	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	2	2	100.0	3	2	66.7	-33.2	.0
MATH AND STAT	17	13	76.5	18	14	77.8	-5.5	-7.0
EQUIP, FAC, SVC	1		.0	1		.0	.0	.0
EDUCATION	3	1	33.3	2		.0	.0	*
INVESTIGATION								
CLAM DUAL CONT								
SUPPLY	8	1	12.5	7	1	14.3	14.3	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	2,344	579	24.5	2,165	567	26.2	8.2	1.9

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FEDERAL HOME LOAN BANK BOARD ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1	1	100.0			.0	*	*
SOC SCI, PSYCH	8	1	12.5	7	1	14.3	14.3	.0
PERS HOMT	11	6	54.5	10	5	50.0	10.0	20.0
GEN ADMIN	375	294	78.4	340	276	81.2	10.3	6.5
BIOL SCIENCES								
ACCT AND BUDGET	650	42	6.5	685	32	4.7	-5.0	31.3
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	36	3	8.3	35		.0	.0	*
INFO AND ARTS	5	1	20.0	5	1	20.0	.0	.0
BUS AND INDUSTRY	111	11	9.9	104	8	7.7	6.7	37.5
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	1	1	100.0	1	1	100.0	.0	.0
MATH AND STAT	9	4	44.4	10	5	50.0	-9.9	-19.9
EQUIP, FAC, SVC	1		.0			.0	*	.0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	1		.0			.0	*	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	1,209	364	30.1	1,197	329	27.5	1.0	10.6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE II FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FEDERAL MARITIME COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	5		.0	6		.0	-16.6	.0
PERS MGMT	5	3	60.0	5	3	60.0	.0	.0
GEN ADMIN	90	65	72.2	89	65	73.0	1.1	.0
BIOL SCIENCES								
ACCT AND BUDGET	12	3	25.0	13	3	23.1	-7.6	.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	31	3	9.7	31	1	3.2	.0	200.0
INFO AND ARTS	1	1	100.0	1	1	100.0	.0	.0
BUS AND INDUSTRY	47	3	6.4	50	4	8.0	-5.9	-24.9
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT	4	4	100.0	4	4	100.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION	16		.0	17		.0	-5.9	.0
COMMUNICATION								
SUPPLY								
TRANSPORTATION	9	4	44.4	9	5	55.6	.0	-19.9
POSTAL								
TOTAL A/	220	86	39.1	225	86	38.2	-2.1	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FED MEDIATN & CONCILATN SERV ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP								
SOC SCI, PSYCH	1		.0	1		.0	.0	.0
PERS MGMT	288	4	1.4	288	4	1.4	1.6	.0
GEN ADMIN	131	106	80.9	127	107	84.3	3.1	-.8
BIOL SCIENCES								
ACCT AND BUDGET	17	12	70.6	16	11	68.8	5.3	9.1
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	1		.0			.0	*	.0
LIBR AND ARTS	1		.0	1		.0	.0	.0
BUS AND INDUSTRY	1		.0	1		.0	.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
CLAIM DUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	435	122	28.0	434	122	28.1	.2	.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FEDERAL POWER COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	36	6	16.7	41	7	17.1	-12.1	-14.2
PERS MGMT	12	6	50.0	12	6	50.0	.0	.0
GEN ADMIN	325	239	73.5	328	249	75.9	- .8	-3.9
BIOL SCIENCES	2		.0	1		.0	100.0	.0
ACCT AND BUDGET	125	12	9.6	136	13	9.6	-8.0	-7.6
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	259	2	.8	257	1	.4	.8	100.0
LEGAL AND KINDRED	121	17	14.0	120	20	16.7	.8	-14.9
INFO AND ARTS	8	5	62.5	8	5	62.5	.0	.0
BUS AND INDUSTRY	104	31	29.8	105	31	29.5	-.9	.0
COPYRIGHT, PAT								
PHYSICAL SCI	37	3	8.1	34	3	8.8	8.8	.0
LIBR, ARCHIVE	7	4	57.1	7	4	57.1	.0	.0
MATH AND STAT	9	5	55.6	11	7	63.6	-18.1	-28.5
EQUIP, FAC, SVC	1		.0	1		.0	.0	.0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	3		.0	2		.0	50.0	.0
TRANSPORTATION			.0	1	1	100.0	-100.0	-100.0
POSTAL								
TOTAL A/	1,049	339	31.5	1,064	347	32.6	-1.3	-4.8

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FEDERAL TRADE COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	46	6	13.0	41	6	14.6	12.2	.0
PERS MGMT	11	7	63.6	9	6	66.7	22.2	16.7
GEN ADMIN	514	447	87.0	462	408	88.3	11.3	9.6
BIOL SCIENCES	1		.0	1		.0	.0	.0
ACCT AND BUDGET	38	15	39.5	42	18	42.9	-9.4	-16.6
MED, DENT, PH	5	2	40.0	5	2	40.0	.0	.0
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	543	55	10.3	566	43	7.6	-4.0	30.2
INFO AND ARTS	14	6	42.9	10	5	50.0	40.0	20.0
BUS AND INDUSTRY	98	26	26.5	6	3	50.0	*	766.7
COPYRIGHT, PAT								
PHYSICAL SCI	9	5	55.6	12	5	41.7	-24.9	.0
LIBR, ARCHIVE	7	5	71.4	8	6	75.0	-12.4	-16.6
MATH AND STAT	27	21	77.8	24	18	75.0	12.5	16.7
EQUIP, FAC, SVC								
EDUCATION	1	1	100.0			.0	*	*
INVESTIGATION	3		.0	42	2	.0	.0	.0
COMM DUAL CMT								
SUPPLY	2		.0	2		.0	.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	1,319	597	45.3	1,230	522	42.4	7.2	14.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

FOREIGN CLAIMS SETTLEMT COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT								
GEN ADMIN	19	13	68,4	21	14	66,7	-9,4	-7,0
BIOL SCIENCES								
ACCT AND BUDGET	3		,0	1		,0	200,0	,0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	11	2	18,2	15	3	20,0	-26,7	-33,2
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMMUNICAT CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	33	15	45,5	37	17	45,9	-10,7	11,7-

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE 4 FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

GENERAL SERVICES ADMIN ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---		TOTAL	WOMEN
		NUMBER	%		NUMBER	%		
MISC OCCUP	3,263	11	.3	3,125	11	.4	4.4	.0
SOC SCI, PSYCH	18	8	44.4	12	3	25.0	50.0	166.7
PERS MGMT	404	197	48.8	395	204	51.6	2.3	- 3.3
GEN ADMIN	6,537	4,710	72.1	6,709	5,000	74.5	- 2.5	-5.7
BIOL SCIENCES	3		.0	3		.0	.0	.0
ACCT AND BUDGET	830	446	53.7	871	476	54.6	- 4.6	- 6.2
MED, DENT, PH	21	21	100.0	23	23	100.0	- 8.6	-8.6
VETERINARY MED								
ENG AND ARCH	1,041	10	.9	996	8	.8	6.5	25.0
LEGAL AND KINDRED	153	57	37.3	145	55	37.9	5.5	3.6
INFO AND ARTS	141	80	56.7	133	82	61.7	6.0	- 2.3
BUS AND INDUSTRY	2,185	504	23.1	2,096	433	20.7	4.2	16.4
COPYRIGHT, PAT								
PHYSICAL SCI	89	13	14.6	87	12	13.8	2.3	8.3
LIBR, ARCHIVE	809	254	26.3	911	257	28.2	- 1.2	-1.1
MATH AND STAT	27	12	44.4	21	12	57.1	28.6	.0
EQUIP, FAC, SVC	89	1	1.1	103	1	1.0	- 13.5	.0
EDUCATION	11	4	36.4	12	5	41.7	- 8.2	-19.9
INVESTIGATION	43	1	2.3	48	1	2.1	-10.3	.0
COMM DUAL CONT	310	6	1.9	314	5	1.6	- 1.2	20.0
SUPPLY	1,905	704	37.0	1,801	656	36.4	5.8	7.3
TRANSPORTATION	516	142	27.5	609	138	22.7	-15.2	2.9
POSTAL								
TOTAL A/	18,505	7,181	38.8	18,414	7,382	40.1	.5	- 2.6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

U. S. INFORMATION AGENCY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	29		.0	27		.0	7.4	.0
SOC SCI, PSYCH	42	10	23.8	44	10	22.7	- 4.4	.0
PERS MGMT	72	29	40.3	82	35	42.7	-12.1	-17.0
GEN ADMIN	1,054	789	74.9	1,093	799	73.1	- 3.5	- 1.2
BIOL SCIENCES								
ACCT AND BUDGET	143	74	52.4	137	67	48.9	4.4	11.9
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	103		.0	98		.0	5.1	.0
LEGAL AND KINDRED	7		.0	7		.0	.0	.0
INFO AND ARTS	2,439	439	18.0	2,645	486	18.4	- 7.7	- 9.6
BUS AND INDUSTRY	57	30	52.6	56	27	48.2	1.8	11.1
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	51	40	78.4	58	43	74.1	-12.0	- 6.9
MATH AND STAT	1		.0			.0	*	.0
EQUIP, FAC, SVC	25		.0	29	2	.0	.0	.0
EDUCATION	20	8	40.0	29	11	37.9	-30.9	-27.2
INVESTIGATION	11		.0	11		.0	.0	.0
COMM QUAL CONT								
SUPPLY	18	8	44.4	20	10	50.0	- 9.9	-19.9
TRANSPORTATION	21	9	42.9	19	10	52.6	10.5	- 9.9
POSTAL								
TOTAL A/	4,093	1,437	35.1	4,355	1,500	34.4	- 5.9	- 4.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

INTERSTATE COMMERCE COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	18	4	22.2	15	3	20.0	20.0	33.3
PERS MGMT	13	5	38.5	14	5	35.7	- 7.0	.0
GEN ADMIN	691	531	78.0	708	554	78.2	- 3.7	- 4.1
BIOL SCIENCES								
ACCT AND BUDGET	196	27	21.4	137	37	27.0	- 7.9	- 26.9
MED, DENT, PH	1	1	100.0	1	1	100.0	.0	.0
VETERINARY MED								
ENG AND ARCH	10		.0	10		.0	.0	.0
LEGAL AND KINDRED	372	67	18.0	404	65	16.1	- 7.8	3.1
LIBR AND ARTS	9	6	66.7	10	7	70.0	- 9.9	- 14.2
BUS AND INDUSTRY	16	5	31.3	15	4	26.7	6.7	25.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	4	3	75.0	5	3	60.0	- 19.9	.0
MATH AND STAT	32	20	62.5	42	26	61.9	- 23.7	- 23.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION	16		.0	18		.0	- 11.0	.0
COMM DUAL CONT								
SUPPLY	3		.0	3		.0	.0	.0
TRANSPORTATION	490	17	4.3	413	19	4.6	- 3.0	- 10.4
POSTAL								
TOTAL A/	1,791	586	40.3	1,795	724	40.3	- 5.1	- 5.1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NAT AERONAUTICS & SPACE ADMIN ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	175	8	4,6	195	9	4,6	-10,2	-11,0
SOC SCI, PSYCH	33	5	15,2	33	6	18,2	,0	-16,6
PERS MGMT	352	150	42,6	372	161	43,3	-5,3	-6,7
GEN ADMIN	5,057	3,375	66,7	5,503	3,794	68,9	-8,0	-10,9
BIOL SCIENCES	80	18	22,5	88	20	22,7	-9,0	-9,9
ACCT AND BUDGET	743	354	47,6	803	382	47,6	-7,4	-7,2
MED, DENT, PH	51	15	29,4	49	15	30,6	4,1	,0
VETERINARY MED			,0	1			-100,0	
ENG AND ARCH	12,610	116	,9	12,948	135	1,1	,5	-14,0
LEGAL AND KINDRED	74	14	18,9	84	16	19,0	-11,8	-12,4
INFO AND ARTS	543	139	25,6	589	154	26,1	-7,7	-9,6
BUS AND INDUSTRY	1,423	318	22,3	1,534	345	22,5	-7,1	-7,7
COPYRIGHT, PAT	33		,0	36		,0	-8,2	,0
PHYSICAL SCI	4,875	270	5,5	5,164	288	5,6	-5,5	-6,2
LIBR, ARCHIVE	140	80	57,1	141	82	58,2	-,6	-2,3
MATH AND STAT	156	129	82,7	193	162	83,9	-19,1	-20,3
EQUIP, FAC, SVC	244	4	1,6	294	4	1,4	-16,9	,0
EDUCATION	18	3	16,7	23	3	13,0	-21,6	,0
INVESTIGATION	3		,0	5		,0	-39,9	,0
COMM QUAL CONT	654		,0	708		,0	-6,1	,0
SUPPLY	404	88	21,8	413	90	21,8	-2,1	-2,1
TRANSPORTATION	121	52	43,0	132	55	41,7	-8,2	-5,4
POSTAL								
TOTAL A/	27,799	5,138	18,5	28,908	5,721	19,8	-3,7	-10,1

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NAT CAPITAL PLANNING COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	20	1	5.0	17	1	5.9	17.6	.0
SOC SCI, PSYCH PERS MGMT	3		.0	3	1	.0	.0	.0
GEN ADMIN	18	13	72.2	20	16	80.0	- 9.9	- 18.7
BIOL SCIENCES								
ACCT AND BUDGET	1	1	100.0	1	1	100.0	.0	.0
MED, DENT, PH VETERINARY MED								
ENG AND ARCH	8	2	25.0	10	2	20.0	-19.9	.0
LEGAL AND KINDRED	1		.0	2		.0	-49.9	.0
INFO AND ARTS	3	2	66.7	6	5	83.3	-49.9	-59.9
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI	4	1	25.0	5	1	20.0	-19.9	.0
LIBR, ARCHIVE	1	1	100.0	1	1	100.0	.0	.0
MATH AND STAT	1	1	100.0	1	1	100.0	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	40	22	36.7	66	29	43.9	-9.0	-24.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NAT FOUNDTN ON ARTS & HUMAN ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT	2	1	50,0	2	1	50,0	,0	,0
GEN ADMIN	80	59	73,8	57	41	71,9	40,4	43,9
BIOL SCIENCES								
ACCT AND BUDGET	10	8	80,0	8	7	87,5	25,0	14,3
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	2		,0			,0	*	,0
INFO AND ARTS	4	3	75,0	3	3	100,0	33,3	,0
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT			,0	1	1	100,0	-100,0	-100,0
EQUIP, FAC, SVC								
EDUCATION	6	3	50,0	3	1	33,3	100,0	200,0
INVESTIGATION								
COMM QUAL CONT								
SUPPLY			,0	1			-100,0	
TRANSPORTATION								
POSTAL								
TOTAL A/	104	74	71,2	75	54	72,0	38,7	37,0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NAT LABOR RELATIONS BOARD ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1949			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	2	1	50.0	2	1	50.0	.0	.0
STC SCI, PSYCH			.0	1	1	100.0	-100.0	-100.0
PERS MGMT	353	43	12.2	342	47	13.7	3.2	-8.4
GEN ADMIN	778	692	88.9	794	716	90.2	-1.9	-3.3
BIOL SCIENCES								
ACCT AND BUDGET	33	20	60.6	31	19	61.3	6.5	5.3
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	872	79	9.1	965	91	9.4	-9.5	-13.1
INFO AND ARTS	21	16	76.2	18	12	66.7	16.7	33.3
BUS AND INDUSTRY	5	3	60.0	4	3	75.0	25.0	.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	4	4	100.0	4	4	100.0	.0	.0
MATH AND STAT	7	6	85.7	7	6	85.7	.0	.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	3		.0	3		.0	.0	.0
TRANSPORTATION	1		.0	1		.0	.0	.0
POSTAL								
TOTAL A/	2,079	864	41.6	2,172	900	41.4	-4.2	-3.9

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NATIONAL MEDIATION BOARD ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT	21		,0	20		,0	5,0	,0
GEN ADMIN	62	49	79,0	70	54	77,1	-11,3	-9,2
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED								
INFO AND ARTS								
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	83	49	59,0	90	54	60,0	-7,7	-9,2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

NATIONAL SCIENCE FOUNDATION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	52	12	23.1	48	13	27.1	8.3	- 7.6
PERS MGMT	11	6	54.5	10	4	40.0	10.0	50.0
GEN ADMIN	568	406	71.5	509	377	74.1	11.6	7.7
BIOL SCIENCES	31	10	32.3	28	9	32.1	10.7	11.1
ACCT AND BUDGET	63	20	31.7	69	20	29.0	8.6	.0
MED, DENT, PH	2	1	50.0	2	1	50.0	.0	.0
VETERINARY MED								
ENG AND ARCH	19		.0	19		.0	.0	.0
LEGAL AND KINDRED	6	1	16.7	5	1	20.0	20.0	.0
INFO AND ARTS	17	5	29.4	15	5	33.3	13.3	.0
BUS AND INDUSTRY	36	6	16.7	38	6	15.8	- 5.2	.0
COPYRIGHT, PAT								
PHYSICAL SCI	75	1	1.3	82	3	3.7	- 8.4	- 66.6
LIBR, ARCHIVE	5	3	60.0	5	3	60.0	.0	.0
MATH AND STAT	12	7	58.3	11	6	54.5	9.1	16.7
EQUIP, FAC, SVC	3	1	33.3	3	1	33.3	.0	.0
EDUCATION	56	10	17.9	60	11	18.3	- 6.6	- 9.0
INVESTIGATION								
CLAIM DUAL CONT								
SUPPLY	7	2	28.6	7	2	28.6	.0	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	943	491	51.0	911	462	50.7	5.7	6.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

PANAMA CANAL COMPANY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	99	2	2,0	92		,0	,0	*
SOC SCI, PSYCH	2		,0	2		,0	,0	,0
PERS MGMT	50	17	34,0	56	21	37,5	-10,6	-18,9
GEN ADMIN	243	142	58,4	235	135	57,4	3,4	5,2
BIOL SCIENCES	2		,0			,0	*	,0
ACCT AND BUDGET	138	61	44,2	153	70	45,8	-9,7	-12,8
MED, DENT, PH	2	2	100,0	2	2	100,0	,0	,0
VETERINARY MED								
ENG AND ARCH	120	1	,8	119		,0	,0	*
LEGAL AND KINDRED	23	9	39,1	24	12	50,0	-4,1	-24,9
INFO AND ARTS	27	8	29,6	25	8	32,0	8,0	,0
BUS AND INDUSTRY	101	25	24,8	99	23	23,2	2,0	8,7
COPYRIGHT, PAT								
PHYSICAL SCI	16	3	18,8	15	3	20,0	6,7	,0
LIBR, ARCHIVE								
MATH AND STAT	1	1	100,0	1	1	100,0	,0	,0
EQUIP, FAC, SVC	25	2	8,0	26	1	3,8	-3,7	100,0
EDUCATION	9	1	11,1	8	1	12,5	12,5	,0
INVESTIGATION	28		,0	30		,0	-6,6	,0
COMM QUAL CONT								
SUPPLY	22	2	9,1	23	3	13,0	-4,2	-33,2
TRANSPORTATION	61	2	3,3	58	3	5,2	5,2	-33,2
POSTAL								
TOTAL A/	969	278	28,7	968	283	29,2	,1	-1,7

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

PUBLIC LAND LAW REVIEW COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT								
GEN ADMIN	6	4	66.7	29	13	44.8	-79.2	-69.1
BIOL SCIENCES								
ACCT AND BUDGET								
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	1		.0	8		.0	-87.4	.0
INFO AND ARTS	1	1	100.0	2		.0	.0	*
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE								
MATH AND STAT			.0	1	1	100.0	-100.0	-100.0
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	8	5	62.5	40	14	35.0	-79.9	-64.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

RAILROAD RETIREMENT BOARD — ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	3	1	33,3	1		,0	,0	*
PERS MGMT	15	6	40,0	16	8	50,0	-6,2	-24,9
GEN ADMIN	724	494	68,2	673	449	66,7	7,6	10,0
BIOL SCIENCES								
ACCT AND BUDGET	61	48	78,7	58	48	82,8	5,2	,0
MED, DENT, PH	4	1	25,0	4	1	25,0	,0	,0
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	864	396	45,8	873	392	44,9	-,9	1,0
INFO AND ARTS	5	2	40,0	5	2	40,0	,0	,0
BUS AND INDUSTRY	2		,0	2		,0	,0	,0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	3	2	66,7	5	4	80,0	-39,9	-49,9
MATH AND STAT	22	10	45,5	36	19	52,8	-38,8	-47,3
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM DUAL CONT								
SUPPLY	3	2	66,7	4	2	50,0	-24,9	,0
TRANSPORTATION								
POSTAL								
TOTAL A/	1,706	962	56,4	1,677	925	55,2	1,7	4,0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS,

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

RENEGOTIATION BOARD ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	1		.0	1		.0	.0	.0
PERS MGMT	1	1	100.0	1	1	100.0	.0	.0
GEN ADMIN	119	85	71.4	112	77	68.8	6.3	10.4
BIOL SCIENCES								
ACCT AND BUDGET	56	3	5.4	53	3	5.7	5.7	.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	10		.0	9		.0	11.1	.0
INFO AND ARTS								
BUS AND INDUSTRY	48	3	6.3	37	1	2.7	29.7	200.0
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	1	1	100.0	1	1	100.0	.0	.0
MATH AND STAT								
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	236	93	39.4	214	83	38.8	10.3	12.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

SECURITIES AND EXCHANGE COMM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	22	5	22.7	22	6	27.3	.0	-16.6
PERS MGMT	13	7	53.8	12	6	50.0	8.3	16.7
GEN ADMIN	502	363	72.3	500	370	74.0	.4	-1.8
BIOL SCIENCES								
ACCT AND BUDGET	92	11	12.0	86	13	15.1	7.0	-15.3
MED, DENT, PH			.0	1	1	100.0	-100.0	-100.0
VETERINARY MED								
ENG AND ARCH	6		.0	6		.0	.0	.0
LEGAL AND KINDRED	480	40	8.3	429	38	8.9	11.9	5.3
LIBR AND ARTS	4	1	25.0	4		.0	.0	*
BUS AND INDUSTRY	97	14	14.4	96	11	11.5	1.0	27.3
COPYRIGHT, PAT								
PHYSICAL SCI	1		.0	1		.0	.0	.0
LIBR, ARCHIVE	5	3	60.0	6	4	66.7	-16.6	-24.9
MATH AND STAT	27	16	59.3	29	16	55.2	-5.8	.0
EQUIP, FAC, SVC	1		.0	1	1	.0	.0	.0
EDUCATION								
INVESTIGATION	131		.0	132		.0	-.7	.0
COMM QUAL CONT								
SUPPLY	3	1	33.3	4	1	25.0	-24.9	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	1,384	461	33.3	1,329	467	35.1	4.1	-1.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

SELECTIVE SERVICE SYSTEM ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT	67	57	85,1	62	55	88,7	8,1	3,6
GEN ADMIN	6,346	6,012	94,4	6,284	5,954	94,7	1,3	1,0
BIOL SCIENCES								
ACCT AND BUDGET	108	98	90,7	108	98	90,7	,0	,0
MED, DENT, PH			,0	2	1	50,0	-100,0	-100,0
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	12	2	16,7	8	3	37,5	50,0	-33,2
INFO AND ARTS	9	4	44,4	3	2	66,7	200,0	100,0
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	1	1	100,0	1	1	100,0	,0	,0
MATH AND STAT	12	9	75,0	16	11	68,8	-24,9	-18,1
EQUIP, FAC, SVC	2		,0	2		,0	,0	,0
EDUCATION	1	1	100,0	1	1	100,0	,0	,0
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	94	8	14,8	49	6	12,2	10,2	33,3
TRANSPORTATION			,0	2	2	100,0	-100,0	-100,0
POSTAL								
TOTAL A/	6,632	6,192	93,4	6,538	6,134	93,8	1,4	,9

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

SMALL BUSINESS ADMINISTRATION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1	1	100.0			.0	*	*
SOC SCI, PSYCH	12	1	8.3	13	2	15.4	- 7.6	- 49.9
PERS MGMT	49	35	72.5	60	42	70.0	15.0	19.0
GEN ADMIN	1,842	1,441	78.2	1,770	1,367	77.2	4.1	5.4
BIOL SCIENCES								
ACCT AND BUDGET	457	279	61.1	460	294	63.9	- .6	- 5.0
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH	36		.0	40		.0	-9.9	.0
LEGAL AND KINDRED	302	111	36.8	302	120	39.7	.0	- 7.4
INFO AND ARTS	19	8	42.1	24	12	50.0	-20.7	-33.2
BUS AND INDUSTRY	1,599	56	3.5	1,483	51	3.4	7.8	9.8
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	12	5	41.7	13	5	38.5	- 7.6	.0
MATH AND STAT	15	10	66.7	16	11	68.8	- 6.2	-9.0
EQUIP, FAC, SVC	2	1	50.0	2	1	50.0	.0	.0
EDUCATION	3	1	33.3	2	1	50.0	50.0	.0
INVESTIGATION	8		.0	8		.0	.0	.0
COMM QUAL CONT								
SUPPLY	17	2	11.8	12	2	16.7	41.7	.0
TRANSPORTATION								
POSTAL								
TOTAL A/	4,394	1,966	44.7	4,205	1,908	45.4	4.5	3.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

SMITHSONIAN INSTITUTION (INCL. NATL GALLERY OF ART) ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	414		.0	430		.0	- 3.6	.0
SOC SCI, PSYCH	29	3	10.3	28	7	25.0	3.6	- 57.0
PERS MGMT	21	12	57.1	24	13	54.2	- 12.4	- 7.6
GEN ADMIN	443	332	71.7	402	296	73.6	15.2	12.2
BIOL SCIENCES	97	9	9.3	91	7	7.7	6.6	28.6
ACCT AND BUDGET	40	21	52.5	33	16	48.5	21.2	31.3
MED, DENT, PH	4	4	100.0	4	4	100.0	.0	.0
VETERINARY MED	2		.0	2		.0	.0	.0
ENG AND ARCH	26		.0	19		.0	36.8	.0
LEGAL AND KINDRED	5	1	20.0	6	2	33.3	- 16.6	- 49.9
INFO AND ARTS	470	123	26.2	480	113	23.5	- 2.0	8.8
BUS AND INDUSTRY	16	6	37.5	11	4	36.4	45.5	50.0
COPYRIGHT, PAT								
PHYSICAL SCI	85	8	9.4	81	7	8.6	4.9	14.3
LIBR, ARCHIVE	56	35	62.5	56	36	64.3	.0	2.7-
MATH AND STAT	2	1	50.0	2	1	50.0	.0	.0
EQUIP, FAC, SVC	10	1	10.0	12	1	8.3	-16.6	.0
EDUCATION	12	4	33.3	12	3	25.0	.0	33.3
INVESTIGATION	1		.0	1		.0	.0	.0
COMM DUAL CONT								
SUPPLY	27	6	22.2	26	5	19.2	3.8	20.0
TRANSPORTATION	10	3	30.0	10	3	30.0	.0	.0
POSTAL								
TOTAL A/	1,790	569	31.8	1,730	518	29.9	3.5	9.8

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

U. S. SOLDIER'S HOME ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	32		.0	32		.0	.0	.0
SOC SCI, PSYCH	9	5	55.6	9	5	55.6	.0	.0
PERS MGMT	13	7	53.8	12	6	50.0	8.3	16.7
GEN ADMIN	140	43	30.7	136	45	33.1	2.9	- 4.3
BIOL SCIENCES	1		.0	1		.0	.0	.0
ACCT AND BUDGET	12	10	83.3	11	9	81.8	9.1	11.1
MED, DENT, PH	256	111	43.4	261	96	36.8	-1.8	15.6
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	2	1	50.0	1	1	100.0	100.0	.0
INFO AND ARTS	2		.0	2		.0	.0	.0
BUS AND INDUSTRY	4	4	100.0	3	3	100.0	33.3	33.3
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	7	2	28.6	7	2	28.6	.0	.0
MATH AND STAT								
EQUIP, FAC, SVC	2		.0	3		.0	-33.2	.0
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY	20	6	30.0	18	7	38.9	11.1	- 14.2
TRANSPORTATION								
POSTAL								
TOTAL A/	500	189	37.8	496	174	35.1	.8	8.6

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

U. S. TARIFF COMMISSION ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH	27	8	29.6	26	7	26.9	3.8	14.3
PERS MGMT	4	2	50.0	5	3	60.0	-19.9	-33.2
GEN ADMIN	58	42	72.4	64	46	71.9	- 9.3	- 8.6
BIOL SCIENCES								
ACCT AND BUDGET	11	2	18.2	12	3	25.0	-8.2	-33.2
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	8	2	25.0	5	1	20.0	60.0	100.0
INFO AND ARTS	2	2	100.0	3	3	100.0	-33.2	-33.2
BUS AND INDUSTRY	73	3	4.1	76	4	5.3	- 3.8	-24.9
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	4	3	75.0	5	4	80.0	-19.9	-24.9
MATH AND STAT	26	24	92.3	30	26	86.7	-13.2	- 7.6
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	213	88	41.3	226	97	42.9	-5.7	-9.2

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

TAX COURT OF THE U S ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP								
SOC SCI, PSYCH								
PERS MGMT	1	1	100.0	1	1	100.0		
GEN ADMIN	59	45	76.3	56	43	76.8	5.4	4.7
BIOL SCIENCES								
ACCT AND BUDGET	3	2	66.7	3	2	66.7		
MED, DENT, PH								
VETERINARY MED								
ENG AND ARCH								
LEGAL AND KINDRED	84	19	22.6	89	21	23.6	-5.6	-9.5
INFO AND ARTS	3	3	100.0	3	3	100.0		
BUS AND INDUSTRY								
COPYRIGHT, PAT								
PHYSICAL SCI								
LIBR, ARCHIVE	2	2	100.0	2	1	50.0		100.0
MATH AND STAT	3	2	66.7	3	2	66.7		
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION								
COMM QUAL CONT								
SUPPLY								
TRANSPORTATION								
POSTAL								
TOTAL A/	155	74	47.7	157	73	46.5	-1.3	1.4

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

TENNESSEE VALLEY AUTHORITY ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1949			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	354	3	.8	330	4	1.2	7.3	-24.9
SOC SCI, PSYCH	47	4	8.5	40	3	7.5	17.5	33.3
PERS MGMT	143	73	44.8	157	69	43.9	3.8	5.8
GEN ADMIN	2,243	1,187	52.9	2,136	1,129	52.9	5.0	5.1
BIOL SCIENCES	152	19	12.5	146	16	11.0	4.1	18.8
ACCT AND BUDGET	345	123	35.7	327	108	33.0	5.5	13.9
MED, DENT, PH VETERINARY MED	105	54	51.4	91	43	47.3	15.4	25.6
ENG AND ARCH	3,032	135	4.5	2,589	115	4.4	17.1	17.4
LEGAL AND KINDRED	59	8	13.6	60	8	13.3	-1.6	.0
INFO AND ARTS	58	9	15.5	56	9	16.1	3.6	.0
BUS AND INDUSTRY	117	6	5.1	113	5	4.4	3.5	20.0
COPYRIGHT, PAT								
PHYSICAL SCI	207	11	5.3	205	11	5.4	1.0	.0
LIBR, ARCHIVE	25	22	88.0	25	22	88.0	.0	.0
MATH AND STAT	70	37	52.9	73	40	54.8	-4.0	-7.4
EQUIP, FAC, SVC	708	31	4.4	649	27	4.2	9.1	14.8
EDUCATION	5		.0	5		.0	.0	.0
INVESTIGATION								
COMM DUAL CONT	134		.0	111		.0	20.7	.0
SUPPLY	227	25	11.0	215	19	8.8	5.5	31.6
TRANSPORTATION	31	1	3.2	34	1	2.9	-8.7	.0
POSTAL								
TOTAL A/	8,092	1,748	21.6	7,362	1,629	22.1	9.8	7.3

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE H — FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

VETERANS ADMINISTRATION — ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	WOMEN		TOTAL	WOMEN			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1,694		.0	1,595		.0	.6	.0
SOC SCI, PSYCH	3,943	1,294	32.8	3,843	1,240	32.3	2.6	4.4
PERS MGMT	1,455	692	47.6	1,435	679	47.3	1.4	1.9
GEN ADMIN	28,716	21,045	73.3	28,096	20,595	73.3	2.2	2.2
BIOL SCIENCES	1,128	458	40.6	1,147	457	39.8	-1.6	.2
ACCT AND BUDGET	3,887	1,928	49.8	3,806	1,871	49.2	1.3	2.6
MED, DENT, PH	63,812	33,866	53.1	62,267	32,198	51.7	2.5	5.2
VETERINARY MED	4		.0	3		.0	33.3	.0
ENG AND ARCH	895	17	1.9	850	15	1.8	4.1	13.3
LEGAL AND KINDRED	5,840	1,751	30.0	5,552	1,569	28.3	5.2	11.6
INFO AND ARTS	297	58	19.5	291	52	17.9	2.1	11.5
BUS AND INDUSTRY	1,776	485	27.3	1,822	469	25.7	-2.4	3.4
COPYRIGHT, PAT								
PHYSICAL SCI	744	217	28.4	772	224	29.0	-.9	-3.0
LIBR, ARCHIVE	390	331	84.9	391	339	86.7	-.2	-2.3
MATH AND STAT	295	168	56.9	291	170	58.4	-12.3	-14.6
EQUIP, FAC, SVC	44	2	3.1	72	2	2.8	-11.0	.0
EDUCATION	176	10	5.1	185	10	5.4	5.9	.0
INVESTIGATION	84		.0	86		.0	-2.2	.0
COMM QUAL CONT	15		.0	10		.0	50.0	.0
SUPPLY	2,457	961	20.9	2,456	624	25.4	.0	5.9
TRANSPORTATION	298	135	62.5	208	133	63.9	.0	-2.2
POSTAL								
TOTAL A/	117,790	63,083	53.6	115,178	60,647	52.7	2.2	4.0

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

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TABLE H FULL-TIME WHITE COLLAR EMPLOYMENT BY OCCUPATIONAL GROUP

OTHER AGENCIES ALL AREAS

OCCUPATIONAL GROUP	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
	TOTAL	--- WOMEN ---		TOTAL	--- WOMEN ---			
		NUMBER	%		NUMBER	%	TOTAL	WOMEN
MISC OCCUP	1						*	
SOC SCI, PSYCH	9	2	22.2	13	2	15.4	-30.7	
PERS MGMT	5	2	40.0				*	*
GEN ADMIN	566	326	57.6	319	187	58.6	77.4	79.7
BIOL SCIENCES	1						*	
ACCT AND BUDGET	327	11	3.4	3	2	66.7	*	450.0
MED, DENT, PH				1			-100.0	
VETERINARY MED								
ENG AND ARCH	10			4			150.0	
LEGAL AND KINDRED	50	8	16.0	40	6	15.0	25.0	33.3
INFO AND ARTS	14	8	57.1	8	6	75.0	75.0	33.3
BUS AND INDUSTRY	3						*	
COPYRIGHT, PAT								
PHYSICAL SCI	10			8			25.0	
LIBR, ARCHIVE	1	1	100.0	2	2	100.0	-50.0	-50.0
MATH AND STAT	5	2	40.0	2	2	100.0	150.0	
EQUIP, FAC, SVC								
EDUCATION								
INVESTIGATION				2			-100.0	
COMM QUAL CONT								
SUPPLY	2						*	
TRANSPORTATION								
POSTAL								
TOTAL A/	1,004	360	35.9	402	207	51.5	149.7	73.9

A/ EXCLUDES FOREIGN NATIONALS OVERSEAS.

TABLE I

FULL-TIME WHITE-COLLAR EMPLOYMENT
BY SELECTED AGENCIES
WORLDWIDE

OTHER AGENCIES

AGENCY	EMPLOYMENT 31 OCTOBER 1970			EMPLOYMENT 31 OCTOBER 1969			PERCENT CHANGE	
		----WOMEN----			--WOMEN--			
	TOTAL	NUMBER	%	TOTAL	NUMBER	%	TOTAL	WOMEN
ADMINISTRATIVE CONFERENCE OF THE U.S.	5	2	40.0	7	3	42.9	- 28.6	- 33.3
ADVIS COM ALL VOL ARM FORCE	TERMINATED MARCH 1970			14	9	64.3	-100.0	-100.0
ADVISORY GROUP OF PRES. VOTE P.R.	3	1	33.3	ESTABLISHED AUGUST 1970			100.0	100.0
AMERICAN REVOLUTION BICENTENNIAL	15	7	46.7	6	4	66.7	150.0	75.0
APPALACHIAN REGIONAL COMM	10	4	40.0	9	4	44.4	11.1	0.0
CABT COMT ON OP SPAN SPK	25	11	44.0	ESTABLISHED DECEMBER 1969			100.0	100.0
CAB TASK FORCE ON OIL IMPORT	TERMINATED FEBRUARY 1970			9	4	44.4	-100.0	-100.0
COASTAL PLAINS REGIONAL COMM	7	3	42.9	6	2	33.3	16.7	50.0
COMMISSION OF FINE ARTS	4	2	50.0	6	3	50.0	- 33.3	- 33.3
COMM FINAN STRUCT AND REG	5	2	40.0	ESTABLISHED APRIL 1970			100.0	100.0
COMMISSION ON CAMPUS UNREST	14	5	35.7	ESTABLISHED JULY 1970			100.0	100.0
COMM ON GOVERNMENT PROCUREMENT	44	23	52.3	ESTABLISHED NOVEMBER 1969			100.0	100.0
COMM ON INTERNATIONAL TRADE	11	5	45.5	ESTABLISHED APRIL 1970			100.0	100.0
COMM ON POPULATION GROWTH	8	5	62.5	ESTABLISHED MARCH 1970			100.0	100.0
COMM ON REF FED CRIMINAL LAWS	6	4	66.7	8	6	75.0	- 25.0	- 33.3
NATIONAL COMM ON VIOLENCE	TERMINATED FEBRUARY 1970			7	5	71.4	-100.0	-100.0
COUNCIL ON ENVIRONMENTAL QUALITY	41	24	58.5	ESTABLISHED JANUARY 1970			100.0	100.0
DELAWARE RIVER BASIN COMM	2	1	50.0	2	1	50.0	0.0	0.0
DOMESTIC COUNCIL	24	9	37.5	ESTABLISHED JULY 1970			100.0	100.0
FED COAL MINE SAFETY BD OF RE	TERMINATED JUNE 1970			3	2	66.7	-100.0	-100.0
FED FIELD COM DIV PLAN ALASKA	9	6	66.7	10	6	60.0	- 10.0	0.0
FEDERAL RADIATION COUNCIL	4	2	50.0	4	2	50.0	0.0	0.0
FOUR CORNERS REGIONAL COMM	5	2	40.0	7	2	28.6	28.6	0.0
INDIAN CLAIMS COMMISSION	38	15	39.5	29	11	37.9	31.0	36.4
INTER-AG COMM MEX-AMER AFFAIRS	TERMINATED MARCH 1970			21	11	52.4	-100.0	-100.0
COMM ON INCOME MAINT PROGRAMS	TERMINATED FEBRUARY 1970			21	15	71.4	-100.0	-100.0
NATIONAL AERO & SPACE COUNCIL	16	9	56.3	22	10	45.5	- 27.3	- 10.0
COUNCIL MARINE RES AND ENGR DEV	18	9	50.0	18	11	61.1	0.0	- 18.2
NEW ENGLAND REGIONAL COMM	7	4	57.1	6	3	50.0	16.7	33.3
NAT COMM CONSUMER FINAN	13	6	46.2	ESTABLISHED MAY 1968			100.0	100.0
NAT COMM ON PRODUCT SAFETY	TERMINATED SEPTEMBER 1970			29	14	48.3	-100.0	-100.0
NAT COUNCIL ON INDIAN	5	2	40.0	ESTABLISHED MARCH 1968			100.0	100.0
NAT CREDIT UNION ADM	421	78	18.5	ESTABLISHED MARCH 1970			100.0	100.0
NAT WATER COMMISSION	35	13	37.1	20	9	45.0	75.0	44.4
COMM ON OBSENITY-PORNOGRAPHY	TERMINATED SEPTEMBER 1970			11	6	54.5	-100.0	-100.0
OFFICE INTERGOVERNMENTAL RELATIONS	4	0	0.0	ESTABLISHED DECEMBER 1969			100.0	100.0
OFFICE OF TELECOM POLICY	43	21	48.8	ESTABLISHED APRIL 1970			100.0	100.0
OFFICE OF THE VICE PRESIDENT	23	17	73.9	ESTABLISHED SEPTEMBER 1970			100.0	100.0
OZARKS REGIONAL COMMISSION	7	3	42.9	5	2	40.0	40.0	50.0
COMM ON CONSUMER INTERESTS	23	14	60.9	20	13	65.0	15.0	7.7
PRES ADV COUNCIL EXEC ORG	20	8	40.0	24	11	45.8	- 16.7	- 27.3
PRES COUNCIL ON YOUTH OPPORT	1	0	0.0	4	1	25.0	- 75.0	-100.0
SUBVERSIVE ACTIVITIES CONT BD	14	5	35.7	14	6	42.9	0.0	- 16.7
UPPER GREAT LAKES REG COMM	2	1	50.0	3	1	33.3	- 33.3	0.0
U.S. MEX BORDER DEV-FRIENDSHIP	TERMINATED JANUARY 1970			11	5	45.5	-100.0	-100.0
WATER RESOURCES COUNCIL	29	9	31.0	27	9	33.3	7.4	0.0
WH CONF ON CHILD YOUTH	38	26	68.4	ESTABLISHED OCTOBER 1969			100.0	100.0
WH CONF FOOD NUTR & HEALTH	TERMINATED JANUARY 1970			19	16	84.2	-100.0	-100.0
CABINET COMM ON EDUCATION	5	2	40.0	ESTABLISHED FEBRUARY 1970 a/				
TOTAL b/	1,004	360	35.9	402	207	51.5	149.8	73.9

a/ Formerly Cabinet Committee on School Desegregation

b/ Excludes Foreign Nationls Overseas

PAY RATES OF THE GENERAL SCHEDULE (5 U.S.C 5332), AS ADJUSTED BY EXECUTIVE ORDER 11576, JANUARY 8, 1971

(The top line opposite each grade number shows the rates which become effective beginning with the first pay period on or after January 1, 1971. The second line shows the rates which were formerly in effect beginning with the first pay period on or after December 27, 1969.)

GENERAL SCHEDULE - BASIC PER ANNUM RATES

GRADE	1	2	3	4	5	6	7	8	9	10	AMT. OF WITHIN-GRADE INCREASE
1	$4,326 $4,170	$4,470 $4,312	$4,614 $4,454	$4,758 $4,596	$4,902 $4,673	$5,046 $4,810	$5,190 $4,947	$5,334 $5,084	$5,478 $5,221	$5,622 $5,358	$ 144 $ 137
2	4,897 4,621	5,060 4,775	5,223 4,929	5,386 5,083	5,549 5,237	5,712 5,391	5,875 5,545	6,038 5,699	6,201 5,853	6,364 6,007	163 154
3	5,524 5,212	5,708 5,386	5,892 5,560	6,076 5,734	6,260 5,908	6,444 6,082	6,628 6,256	6,812 6,430	6,996 6,604	7,180 6,778	184 174
4	6,202 5,853	6,409 6,048	6,616 6,243	6,823 6,438	7,030 6,633	7,237 6,828	7,444 7,023	7,651 7,218	7,858 7,413	8,065 7,608	207 195
5	6,938 6,548	7,169 6,766	7,400 6,984	7,631 7,202	7,862 7,420	8,093 7,638	8,324 7,856	8,555 8,074	8,786 8,292	9,017 8,510	231 218
6	7,727 7,294	7,985 7,537	8,243 7,780	8,501 8,023	8,759 8,266	9,017 8,509	9,275 8,752	9,533 8,995	9,791 9,238	10,049 9,481	258 243
7	8,582 8,098	8,868 8,368	9,154 8,638	9,440 8,908	9,726 9,178	10,012 9,448	10,298 9,718	10,584 9,988	10,870 10,258	11,156 10,528	286 270
8	9,493 8,956	9,809 9,255	10,125 9,554	10,441 9,853	10,757 10,152	11,073 10,451	11,389 10,750	11,705 11,049	12,021 11,348	12,337 11,647	316 299
9	10,470 9,881	10,819 10,213	11,168 10,539	11,517 10,868	11,866 11,197	12,215 11,526	12,564 11,855	12,913 12,184	13,262 12,513	13,611 12,842	349 329
10	11,517 10,869	11,901 11,231	12,285 11,593	12,669 11,955	13,053 12,317	13,437 12,679	13,821 13,041	14,205 13,403	14,589 13,765	14,973 14,127	384 362
11	12,615 11,905	13,036 12,302	13,457 12,699	13,878 13,096	14,299 13,493	14,720 13,890	15,141 14,287	15,562 14,684	15,983 15,081	16,404 15,478	421 397
12	15,040 14,192	15,541 14,665	16,042 15,138	16,543 15,611	17,044 16,084	17,545 16,557	18,046 17,030	18,547 17,503	19,048 17,976	19,549 18,449	501 473
13	17,761 16,761	18,353 17,319	18,945 17,878	19,537 18,437	20,129 18,996	20,721 19,555	21,313 20,114	21,905 20,673	22,497 21,232	23,089 21,791	592 559
14	20,815 19,643	21,509 20,298	22,203 20,953	22,897 21,608	23,591 22,263	24,285 22,918	24,979 23,573	25,673 24,228	26,367 24,883	27,061 25,538	694 655
15	24,251 22,885	25,059 23,648	25,867 24,411	26,675 25,174	27,483 25,937	28,291 26,700	29,099 27,463	29,907 28,226	30,715 28,989	31,523 29,752	808 763
16	28,129 26,547	29,067 27,432	30,005 28,317	30,943 29,202	31,881 30,087	32,819 30,972	33,757 31,857	34,695 32,742	35,633 33,627		938 885
17	32,546 30,714	33,631 31,738	34,716 32,762	35,801 33,786	36,886* 34,810						1,085 1,024
18	37,624* 35,505										

* The rate of basic pay for employees at these rates is limited by section 5308 of title 5 of the United States Code, as added by the Federal Pay Comparability Act of 1970, to the rate for level V of the Executive Schedule (as of the effective date of this salary adjustment, $36,000).

U.S. CIVIL SERVICE COMMISSION
MANPOWER STATISTICS DIVISION PUBLICATIONS
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Occupations of Federal White-Collar Workers		
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October 31, 1968	Pamphlet No. SM 56-08	($1.50)
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Study of Employment of Women in the Federal Government		
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November 30, 1969	Pamphlet No. SM 70-69B	($5.50)
November 30, 1970	Pamphlet No. Sm 70-70B	($4.00)
Grade Trend of Federal Civilian Employment Under the General Schedule 1964-1968		
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•U.S. GOVERNMENT PRINTING OFFICE: 1971-720-246/322

1118

VT 016 874

AGUILAR, ADALBERTO

TUCSON MODEL CITIES EXEMPLARY VOCATIONAL EDUCATION PROGRAM. INTERIM REPORT.

TUCSON PUBLIC SCHOOLS DISTRICT 1, ARIZ.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
OEG-0-71-4168(361)
PUB DATE - 30JUN72 153P.

DESCRIPTORS - *DEVELOPMENTAL PROGRAMS; *VOCATIONAL EDUCATION; VOCATIONAL DEVELOPMENT; *PROGRAM DESIGN; *PROGRAM EVALUATION; RESOURCE MATERIALS; COMMUNITY INVOLVEMENT; COOPERATIVE PROGRAMS; INTERAGENCY COORDINATION; ELEMENTARY GRADES; SECONDARY GRADES; DROPOUT PROGRAMS; *EDUCATIONAL OBJECTIVES; OCCUPATIONAL GUIDANCE
IDENTIFIERS - PUBLIC LAW 90 576; *TUCSON MODEL CITIES

ABSTRACT - THE OVERALL OBJECTIVE OF THE TUCSON MODEL CITIES EXEMPLARY PROGRAM IN VOCATIONAL EDUCATION FOR THE ELEMENTARY AND SECONDARY GRADES IS TO BROADEN OCCUPATIONAL AWARENESS, INCREASE SELF-UNDERSTANDING, AND PROVIDE JOB TRAINING AND PLACEMENT, ESPECIALLY FOR THE ACTUAL AND POTENTIAL DROPOUT. THE PROJECT DESIGN, WHICH INCLUDED WORK EXPERIENCE PROGRAMS, VOCATIONAL COUNSELING, RESOURCE PERSONS, AND COMMUNITY INVOLVEMENT, IN A MULTI-AGENCY APPROACH, WAS DEEMED SUCCESSFUL. A TEAM OF OBSERVERS FROM THE ARIZONA STATE DEPARTMENT OF OCCUPATIONAL EDUCATION CONDUCTED THE ANNUAL PROJECT EVALUATION, INCLUDED IN THIS INTERIM REPORT. ALTHOUGH THE PROGRAM NEEDS IMPROVEMENT AT THE SECONDARY GRADE LEVELS, POSITIVE RESPONSES FROM THE STAFF, STUDENTS, AND COMMUNITY IN TERMS OF AWARENESS AND ACCEPTANCE OF THE PROJECT WERE ENCOURAGING. "HANDS-ON" EXPERIENCES, SKILL DEVELOPMENT CLASSES, AND BASIC EDUCATION COURSES WERE EMPHASIZED. STAFF EXPERIENCE GAINED DURING THIS PERIOD WILL PROVE VALUABLE FOR FUTURE PROGRAM ACTIVITIES, WHICH ARE BRIEFLY ENUMERATED. EXTENSIVE PROJECT AND RESOURCE MATERIALS ARE APPENDED. A SHORT BIBLIOGRAPHY IS PROVIDED. (AG)

VT 016 874

FILMED FROM BEST AVAILABLE COPY

TUCSON PUBLIC SCHOOLS
ROBERT D. MORROW EDUCATION CENTER
P.O. BOX 4040
1010 EAST TENTH STREET
TUCSON, ARIZONA 85717

July 7, 1972

Bureau of Adult, Vocational, and Technical
Education
Attention: Exemplary Program Unit
U. S. Office of Education
Washington, D. C. 20202

Gentlemen:

Enclosed are fifteen copies of the Annual Report for the Model Cities Exemplary Vocational Education Program.

We hope everything is in order. If there are any further questions, we will be glad to answer them. The Financial Report for the Program will soon be ready and will be forwarded at a later date.

We appreciate your cooperation.

Sincerely,

Adalberto Aguilar
Supervisor of Model
Cities Exemplary
Vocational Education
Program

AA:lr

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

INTERIM REPORT

Project No. 361160
Contract No. OEG-0-71-4168(361)

Tucson Model Cities
Exemplary Vocational Education Program

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Adalberto Aguilar
Tucson Public Schools District No. 1
1010 East Tenth
Tucson, Arizona 85717

June 30, 1972

1121

Interim Report

Project No. 361160
Grant No. OEG-0-71-4168(361)

Tucson Model Cities
Exemplary Vocational Education Program

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a Grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Adalberto Aguilar
Tucson Public Schools District No. 1
1010 East Tenth
Tucson, Arizona 85717

June 30, 1972

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5.(a). Time Period Covered by the Report.

This report constitutes an accumulation of information gathered from July 1, 1971, through June 30, 1972.

5.(b). Goals and Objectives of the Project.

The overall objectives of the Exemplary Program is to broaden the occupational understandings of all pupils, help them to an awareness of their own potential, and train and place certain youth, particularly the actual and potential dropout, in employment. This is done in a total school environment reaching from the elementary school through the secondary level and reaches out to involve all pertinent aspects of the community. This all-embracing objective is met through a set of specific sub-objectives.

1. Intensive counseling as the core of the entire program of services in schools involved in the program

2. The use of an elementary vocational education resource person to extend the outreach aspects of the program to the elementary and junior high schools involved in the project.

3. The use, dissemination, and explanation of occupational information materials.

4. The use of industrial environmental conditions and skill development classes as work conditioners and vocational information media.

5. The use of evaluative methods to determine job aptitudes, abilities, and interests.

6. The use of cooperative vocational programs to provide actual work experience.

7. The provision of vocational educational services in a school setting and away from the normal school environment, if necessary.

8. The multi-agency approach to the problems encountered by alienated youth and youth who drop out of educational programs.

9. Work with the sub-cultures of the community to upgrade the image of occupational education.

10. Establishment of placement services to assist all youth in planning further training or acquiring employment.

11. The recruitment of recent dropouts from Model Cities area back into school and in a training program.

12. The identification and counseling of potential dropouts.

13. Utilize the facilities and personnel of the Occupational and Educational Laboratory School of the University of Arizona when necessary.

14. Cooperation with manpower agencies.

15. The formulation of an organizational structure that will articulate the vocational program within the Model City area for elementary through post-secondary students.

16. Establish procedures to facilitate employment of participants in the program when this would be advantageous.

5.(c). Procedures Followed.

The procedures followed in the implementation of the program were as follows:

1. Worked with elementary and junior high school youth through the regular counseling programs of the schools, as well as the existing faculty of those schools located in the Model Cities area. Promoted modifications deemed necessary and beneficial to such youth who, at the time of the project, were in elementary and secondary school.

2. Worked intensively with crisis prone in-and-away-from-school youth who are attending secondary school or youth who would ordinarily be in a typical secondary school population.

3. Assisted students in making adaptions through self-commitment to the most appropriate occupational choices possible with respect to their own abilities, aptitudes and interests.

4. The project team assisted faculty in determining ways in which such youth were provided with information that would be helpful in arriving at more realistic occupational choices consistent with their particular abilities, aptitudes, and interests.

5. The project coordinator, by involving resource people from the various community agencies participating in

the manpower program, such as employers, representatives from labor unions and the like, integrated these representatives into the on-going program of the project. The program coordinator also set up and supervised short-term conferences involving manpower resources, school administrators, counseling staff, and faculty.

6. The director of the project, utilizing his staff, achieved a more accurate understanding of the youth included in the project, to determine where they fit into the vocational scheme of this community.

7. Teachers participated in an organized inservice training program conducted by resource people from the local community and the University of Arizona.

5.(d). Results; Accomplishments.

Results and accomplishments of the program are accurately covered in the body of the report, 6.(d).

5.(e). Evaluation.

Evaluation of the project was conducted by a team of observers from the Arizona State Department of Occupational Education headed by Mr. A. J. Gregan. A copy of the evaluation report is included in Appendix A.

5.(f). Conclusions and Recommendations.

It is the consensus of the project staff members that the program, although wrought with unforeseen obstacles, was a success.

There are areas that need improvement and strengthening. These areas are mostly in the junior high and high school components of the program.

The community, teacher and student awareness and acceptance of the Exemplary Project was one of the most significant and rewarding factors experienced during the first action year.

Emphasis was placed in an extensive counseling guidance program, hands-on experiences in the elementary grades, skill development classes in the high school, and the provision for these participating students to take basic education courses (English, Social Studies, preparation for G.E.D. tests) and actual cooperative work experience programs.

A Site Inspection Team coordinated by the Center for Occupational Education visited our program on February 21 and 22, 1972. The Site Team consisted of the following members: Dr. Robert

Worthington, Associate Commissioner, Bureau of Adult, Vocational and Technical Education, Washington, D. C.; Ms. Mollie Shook, North Carolina State University; Mr. William Loomis, Oregon Department of Education; Mr. Archie Holmes, Minnesota Department of Education; and Mr. Richard Macer, Ohio Department of Education. The Site Team found the project to be unique in the following ways: (See Appendix B for a report copy)

1. Model Cities Coordination.

2. Subcultural emphasis.

3. Intensive work with crisis prone in-school and away-from-school youth.

6.(a). Problem Area.

The project was concerned with in-school youth and youth who were out-of-school, unemployed, and living in the attendance areas of the participating schools. The prime target was the dropout and potential dropout. Intensive work with those identified as potential dropouts channeled them into productive vocational areas; actual dropouts were motivated to return and acquire entry-level skills. Those identified late underwent an intensified program needed to make them employable.

In order to deal adequately with the in-school youth, it was necessary to have a program to serve the three basic levels: the elementary (grades 1-6); the junior high school (grades 7-8); and the high school (grades 9-12). Key elements at the elementary level were provisions for an orientation approach to careers and some hands-on experiences to increase student awareness of occupational options.

The elementary school experience evolved around career awareness and a development theme that included the total career spectrum. It included those careers that do not require a college degree, as well as those that do, and lead to the professions.

The junior high level was a continuation of career development with greater emphasis placed upon various occupational experiences. The World of Construction and World of Manufacturing were stressed in the industrial arts program.

In high school, emphasis was placed on the development of basic skills, attitudes, and general knowledge needed for gainful employment. Simulated work experiences and cooperative work experience were also utilized. The career program was developed in a manner such that it served as a non-blocking career ladder, permitting entrance and continuance at the various levels.

The present program in vocational awareness, guidance, and education and training was, to a degree, modified and expanded at all levels. A concentrated effort was directed toward developing mutual understanding in the subcultural areas.

The original objectives of the project have been modified to better fit the needs of the students involved. In some cases, the objectives were either reworded or adjusted to fit the need intended.

The summary section of this report includes the original objectives as written in the proposal, followed by the revised objectives and some new objectives. These revisions or inclusions are derived from practical observations made by the project staff members who were not included when the proposal was written. Project staffing had not been initiated when the proposal was being formulated.

6.(b). Goals and Objectives of the Project.

The focus of the program is to prepare students to enter gainfully into a career of their choice in which they have ability and interest and to continue learning on-the-job, in a technical school, community college or university.

The objectives of the project follow.

1. Elementary students (grades Pre-K-6) will know about careers as outlined in the program. This will be measured by the instruments provided in the program and the percentage of students accomplishing the program objectives will be reported by level and school.

2. Junior High students (grades 7-8) will know characteristics of the vocations in at least one career cluster after participation in each mini course. This will be measured by instruments provided in the mini courses.

3. High School students (grades 9-12) will become more aware of the career applicability of the skills they learn in the regular curriculum (English, Mathematics, Science, Social Studies) as measured by teacher made instruments.

4. High School students (grades 11-12) will develop the skills needed to have a salable entry level skill through learning in school and experience on the job. This will be measured by employee observations as reported to the counselor upon completion of the 11th and 12th grades.

5. Dropouts will learn skills needed to have a salable entry level skill after participation in the program. This will be measured by the number of dropouts who participate in the program, how long they participate, a report by their counselor on skill development, followed by reports from employers.

6.(c). Description of the General Project Design and the Procedures Followed.

This project is based on ideas from several other career programs. But, this project is unique because: (1) it is a career oriented sequence for grades K-12, and (2) it is used only for students in the Model Cities area.

The ERIC source, as well as another bibliography compiled by them (Intensive High School Occupational Guidance Approaches for Initial Work and Placement), demonstrates the worth of the guidance and counseling phase. Other elements of the proposed senior high objectives are based on references described in "Intensive Training for Job Entry Skills: A Selected Bibliography for Use in Program Development" and "Work Experience for Broadening Occupational Offerings: a Selected Bibliography for Use in Program Development," both of which were prepared by David McCracken and distributed by the ERIC Clearinghouse, the Center for Vocational and Technical Education, the Ohio State University, Columbus, Ohio. The "Orientation Approaches to Increase Student Awareness of Occupational Options" prepared by Nancy Sloan, "The Industrial Arts Curriculum Project" (World of Construction and World of Manufacturing) developed by Ohio State University, and the Education Series developed by Betty Dietz on "You Can Work in the Educational Services, in the Communications Industry, in the Transportation Industry, and in the Health Services," "Teaching Children About Technology" by Dr. Mary Scobey, and "Teaching Elementary Industrial Arts" by Dr. W. R. Miller and Gardner Boyd will be sources of references.

The schools included were chosen from within the Model Cities area. The decision of the administration and teachers was to begin with Davis and Roosevelt Elementary Schools with a total of nineteen teachers. Safford and Spring Junior High Schools and Tucson High were also selected for the initial phase of the project. Most of the students and over 80% of the children of school age in the Model Cities area live in the attendance district assigned to Tucson High School.

The schools to be involved with the general ethnic make-up follow:

First action year:

School	Student Population	% Black	% Mexican-American	% Other
Davis Elementary	255	13.7	85.0	1.3
Roosevelt Elementary	264	40.2	36.7	23.1
Safford Junior High	423	16.6	78.0	5.4
Spring Junior High	511	11.1	74.5	14.4
Tucson High School	2682	13.2	56.4	30.4

The total population of the elementary grades and the junior high schools within the schools selected for the project area were included. In numbers, this amounted to about 2,600 students.

The high school participants were any and all students who wished to take part in this program. Since records of previous years show in the neighborhood of 280 dropouts, (7.37%), it seems reasonable to assume that this program might well serve twice the number when actual dropouts are brought back into the program and potential dropouts are channeled in this direction.

All students from the two elementary and two junior high schools participated in the program. The high school participants were selected primarily from the Tucson High School student population. The population consisted of two categories of youth: those who are in school but who have been identified by their high school counselor as in a crisis situation and possibly in the process of leaving school; the second group will be youth who are out of school but who in the previous year were students at Tucson High School or who terminated from Tucson High School at sometime during the previous year. These youth were recruited through the project staff members utilizing all agencies available to the Model Cities agencies and the Tucson Public Schools.

Once the participants were selected, several methods were used to achieve the intended objectives of the program. These objectives were: (1) Academic class instruction; (2) Various types of counseling; (3) Vocational evaluation; (4) small group discussions; (5) Tutoring; (6) Skills development classes; (7) Vocational orientation and guidance; (8) Cooperative work experience; and (9) On-the-job training.

The in-school students were in regular high school academic classes or placed in special classes for part of the day, after which they were assigned to the intensified skill training classes.

These students received tutoring in subject matter. The away-from-school students who are participating in the program were encouraged to enroll in these classes by attending in the Tucson High School setting.

6.(d). Results and Accomplishments of the Project.

If judged by the criteria of students and teacher interest in the elementary/junior high segment of the program, it can be said that the program has met the objectives.

A significant accomplishment is the fact that out of thirty-five teachers that started the program in the fall, thirty teachers, twenty elementary and ten junior high, remained in the program throughout the school year.

Discussions with the students and pre and posttest indicate that the children gained great exposure to the world of work. The forms and material used in the K-8 portion of the program are included in Appendix C.

This summer the Model Cities Exemplary Program will be a supplement of the Title I Reading Program. Two teachers were hired to set up a one-week career education program in the Model Cities elementary schools. Each teacher will spend one week in each school teaching awareness of the World of Work. Their daily schedule is included in Appendix D.

Student reaction in the high school has generally been favorable. Those students who have been retained in their respective job training stations have been satisfied with their experiences and have shown continued development during their training. Two of the most notable areas of development are in attitudes and maturity.

Another accomplishment is seen in the fact that five out of seven graduating seniors intend to continue training after graduation. It is interesting to note that four of these five students had no definative post secondary plans at the time they enrolled in the program. Discussions with these students indicate that interest in further training was developed as a result of exposure obtained from their job training stations and, in several cases, from the advice and counsel of their job supervisors.

Employers providing job training stations have reacted favorably towards the program's intent and objectives and towards the attitude and job performance of the majority of students placed in training positions. Supervisor's evaluations suggest that the majority of the employers or job supervisors take a close interest in their trainees and make a serious effort to provide guidance, counseling, and assistance to the working student. See Appendix E for Robert Myers' End of Semester Report, and Appendix F for the forms used in the high school.

6.(e). Evaluation of the Project.

The third party evaluation was done by the Arizona State Department of Education, Division of Vocational Education, under the guidance of Mr. A. J. Gregan, Jr., Consultant to Exemplary-Work Study-Career Programs. The ratings consisted of four categories: excellent, good, fair and poor. The project was rated good by all members of the team. A copy of the evaluation report is included in Appendix A.

6.(f). Conclusions, Implications, and Recommendations for the Future.

Based on the experience gained to date, it is concluded that:

1. Although operating at a very low level compared to the total school population, the program has started to fulfill a vital need in terms of providing, counseling, guidance, career awareness, and job training.

2. Viewed in the prospective of late starting time, lack of experienced staff, and marginal resources, it can be fairly stated that the majority of the program's objectives have been met.

3. Response on the part of the staff and faculty, students and employers have been positive.

4. The majority of the students enrolled in the program have gained in terms of developed attitudes, maturity, and training experience that can lead to entry level employment or supportive employment for further training.

5. Staff experience gained during this period will be one of the most valuable assets for future program activities.

For the most part, the program activities were "played by ear" during this period. The many problems common to activation of a new activity were experienced on a daily basis.

One of the significant aspects of this program is the inclusion of provisions for transportation of students to and from job training stations. The lack of adequate transportation resources proved to be a major constraint on the program.

The experiences gained and lessons learned during this period have been most valuable towards identifying problem areas and developing plans for continued program activities. Some of the major actions planned at this time are discussed below.

1. Career Information Center: Experience indicates the requirement for expanded career information activity on the part of the Tucson High School Office. Establishment of a Career Information Center, space availability and resources permitting, is one of the priority actions planned for the coming fall semester. It is anticipated that such a center would provide a point of contact, job information, training information, career oriented literature, and other facilities for the use of students in search of job or career information or assistance. Resources for the Career Center would come from the following places: State Vocational Education Department, Occupational Education Laboratory School, and other local and national agencies.

2. Individual Training Plans (Tentative): It is desirable to establish an individual training plan for each student enrolled in the program. However, this action is contingent on the future office staffing level.

3. Plans be made for staff members to attend professional conferences related to vocational training or career education.

4. A minimum of two visits be made to other school systems engaged in career education programs.

5. Program resources be made available for support of proposed Career Information Center.

Project Director

June 30, 1972
Date

APPENDIX A

State Department Evaluation Report

Key: Y-Yes
N-No

CNA - Could not ascertain
N/A - Not applicable

	Y	N	CNA	N/A
1. Are project staff employed in a manner which insures a coherent program, consistent with the project design and objectives: Need more staff in order to reach goals of program.	XXX X			
2. Are there indications that the project design is consistent with the project objectives?	XXXX			
3. Are lines of authority, areas of responsibility, roles and functions designed and defined in a manner consistent with the project design and adequate to meet its objectives?	XXX		X	
4. Is administrative supervision adequate to accomplish the objectives of the project? Need for testing programs - also placement and follow-up.	XX	X	X	
5. Are project staff activities adequately related to the project goals and objectives, rather than to the general district program?	XXXX			
6. Is there visible evidence of the specialized activities required by the project?	XXXX			
7. Has the project goal or design been altered since the project began operation? Not in operation long enough to determine just got started	XX	X	X	
8. Where required by the project design, is there significant community or parent involvement in the project operation? Especially with D.M.A.F.B. I believe they are - this should be one of their written objectives.	X		X X	
9. Is the goal and design of the project grossly incompatible with the general educational program design of the district? District program should be developed to be more compatible with students on the job.		X XXX		
10. Is there evidence of a degree of need sufficient to justify the funding of the project? There is a need for program - greater need for placement	X XXX			

		Y	N	CNA	X/
11.	Is the project effort focused on its optimal target population? Appeared so, though project is just getting started.	XXX			
12.	Is the project compatible with local needs and resources? But listed. Just beginning to tap both.	XX X			
		One no check			
13.	Is there an indication of satisfaction with the project among the project staff, pupils, parents, or community members? only talked to staff & pupils	XXXX			
14.	Are the project plans and operational procedures available to project staff at appropriate levels to the degree necessary for efficient project implementation? Not sufficient time to determine.	XX	X	XX	
15.	Are the requisite qualified staff employed and present? Adequate staff for what is being done. Additional personnel needed. Appears staff I met are well qualified, but more staff appears necessary	X X		XX	
16.	Has the staff had recent training that enhances their ability to accomplish the objectives of the project? Voluntary participation by teachers. Past experiences of 2 staff members met appears to greatly enforce success of program	X		XX	
17.	Has the staff received orientation relative to their project assignments? But need for more is apparent. Project just beginning. I believe administration is aware of this need.	XXX			
18.	Is staff morale compatible with the success of the project? By participating staff members.	X XXX			
19.	Have project personnel developed an adequate internal monitoring and evaluation procedure? Need for evaluation. Program in operation since 1/1/72 they are working on this along with objectives.	X	X	XX	
20.	According to the project administration, is the project in phase with its fiscal and operational calendar? No Fiscal calendar available.	XX		X	
21.	Is there evidence of waste of project funds?		XXXX		

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		Y	N	CNA	N/A
22.	Are necessary instructional materials in evidence? Needs to be completely developed but have good start.	X XX			
23.	Does the administration favor the objectives of this project? Administrators of projects the one visited school	XXX			
24.	Is the number of pupils involved in the project consistent with the project plan? There should be more pupils involved. Project is just getting started. This is just being developed		XXX	X	
25.	Is the project economically efficient? Not in operation long enough - from what I saw	XX		XX	
26.	Is the project functioning as a part of the total educational program of the school? This I believe is the most important area to be worked on -- if it doesn't happen, the program will not reach its goal.	XXX	X		
27.	Does the pupil-teacher ratio indicate the concentration of effort and resources necessary to the success of the project? By interested personnel	XX		XX	
28.	Is the organization of the school conducive to the successful implementation of the project? But I object to the long hours students at DMAFB put in at school.	XXX		X	
29.	Are the facilities and equipment available to the project that are necessary for its successful implementation? More will be needed as project develops	XXX		X	
30.	Is there evidence that all equipment and supplies provided through categorical funding are being properly used? As far as one short visit would indivate -- appears so.	XXX		X	
31.	Are there available space and housing compatible with project purposes and design? They will need more as their impact increases	XXXX			
32.	Is the project providing services to all persons and institutions specified in the application or required by law? But has worked well with other programs	X		XX	

1 no check

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33. Are all practices or conditions consistent with laws or regulations governing the project?	XX		XX	
34. Are adequate means and intention evident to accomplish competent evaluation of the project? Intention - means being developed - means are being worked on - intent yes. They are working on this at present.	XX	X	X	
35. Do you suggest the project director seek help in properly meeting dissemination obligations? Project directors always need more help	XX	XX		
36. After the conclusion of the project, will it have a permanent effect upon the educational program in the district? Provided it is suggested in carrying out its objectives. Too soon to determine. At present no, but project is just getting started	X X		XX	

SUMMARY SHEET

1. State the strengths and weaknesses of the project as of the evaluation visit date.

STRENGTHS

Enthusiasm of project people - needs of students at DMAFB seem to be being met - summary of activities indicates that a number of necessary things are being done - the Tucson Public School Dist. # 1 seems to give the project good support.

Secondary program and Davis Monthan A.F.B. project excellent
Excellent attitude by staff and teachers.

Project director and staff met. Are doing an excellent job. Interaction with other programs has been developed and is very important. Need for program to become part of total curriculum not just another Vocational program.

WEAKNESSES

No fiscal calendar - no evaluation as yet (instruments are needed)
Schools are not adjusting sufficiently to make the program a success.
Students should not have to spend such long hours in school where they work at DMAFB.

Not enough placement - too many on hold list pending action
Needs to be expanded.
Understaffed
Lack of testing program

The project needs to develop a testing program for the students going into the vocational preparation stage to help the students understand their strengths and weak areas. The project needs to have a good strong relationship with the guidance department.

2. Is the project design and program concept and practice consistent?

Yes, at this early stage of development.

Yes, as far as I can tell.

Yes

3. Is the project practice consistent with stated objectives as per the project calendar?

Yes

With their late start they are doing a very good job.

Yes, as far as the activity calendar goes.

4. What concerns are evident for implementation and management?

The administrators of the schools involved become involved in the implementation of the program as part of their on-going curriculum changes in their respective schools.

A need for testing program

A need for testing placement and follow-up

Cannot answer.

5. Does it appear that this project demonstrates a solution to the problem, that will make a significant impact on the critical educational needs of youngsters? (Specify)

"?" Yes, with the pupils presently on the job, it is being very effective. In the school curriculum as such when students from these jobs are back in the classroom nothing but; he changes in time, is being done to meet needs of student education.

Yes, especially for potential dropouts who may see a reason for staying in school. (But theschools need to change for this to work.)

To a limited number in secondary program/work program too early and difficult to evaluate at elementary level.

For those students involved. This program will help the drop out, but what about those students that they are unable to place?

6. Comments about any important (positive and/or negative) feature of the proposal about which there is no reference.

The project director and staff talked to are aware of problems of the project and are taking steps to meet these. Also of developing new objectives a means of evaluating are being done as an important part of the project.

Are there duplications between this and the Developmental Career Guidance Education Project? If so, how can this be resolved?

Testing program -

Internal follow-up of student interest at elementary level for correlating or consistency into secondary schools. Need for emphasis on placement and follow-up. More extensive use of local advisory committees.

Please rate this project by checking one:

☐	☒ XX	☐	☐
Excellent --E	Good - G	Fair -- F	Poor -- P
	All rated us here		

APPENDIX B

Site Inspection Team Report

Tucson Public Schools
Tucson, Arizona

The career education program is comprised of all grades K-12 divided into three segments: K-6, 7-8, and 9-12. One-hundred percent of the students in the K-6 and 7-8 segments are participating while the number in the 9-12 segment is unknown--students participate on a volunteer basis only at this time.

The overall objective is to broaden occupational understandings, train and place youth, particularly the actual and potential dropout. Through use of counseling, a resource person, information materials, work conditioners, evaluative methods, cooperative vocational programs, placement services, manpower agencies, the Model Cities Project and the multi-agency approach for alienated youth, the program plans to reach its main objectives.

Though the career education concept has been an integral part of this program, it has not been used to its fullest. A greater assimilation is planned by bringing into play community resources, inservice training for teachers, and Model Cities administrative staff and aides. Classroom teachers will assimilate the material as they see a need.

Particular to this career education program is the provision of real hands-on experience in the elementary grades, a change from Industrial Arts to "World of Construction"/"World of Manufacturing" in junior high, and crash programs, increased liaison with community for senior high students and out of school youth.

Due to late funding on Federal and state levels, implementation of the program is not on schedule, therefore there has not been a major curricular change. Rather changes are now being conducted on an individual basis.

Personnel providing supportive services for students in the program are counselors, a Coordinator of Occupational Services, and a part-time psychologist. Guidance, placement and follow-up are being delegated to program staff with the help of the Palo Alto Educational System. Close relations with the Model Cities staff is helping to identify students in need of the career education program, while placement is being aided with the excellent help and cooperation of the personnel in the Davis-Monthan Air Force Base and private industry in the area.

Inservice training for school administrators and teachers is being carried out by means of regularly scheduled meetings to involve them in the planning and implementing of the program. Also, an extension course available to participating teachers is offered by the state university. Other plans for training are being considered at this time.

The initial thrust of community involvement in the program came from the Model Cities Educational Committee. An advisory board has been set up utilizing the staff of the Education Committee, the director of the Bureau of Apprenticeship, and a representative from a private construction firm. There are plans to add a representative of Model Cities. Other input information has been gathered from the community at employee/employer levels.

Evaluation data of the program is being gathered through pretesting and posttesting. Also being used are monthly activity reports and the follow-up of the Palo Alto Educational System.

For further information contact:

Adalberto Aguilar, Supervisor
Model Cities Exemplary Vocational Program
Tucson Public Schools
P. O. Box 4040
Tucson, Arizona 85717

APPENDIX C

K-8 Forms and Material

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

Request Card

NAME_____ SCHOOL_____

Date Wanted_____ Time_____ Subject_____

Film ☐ Title_____

Resource Speaker ☐ Subject_____

Field Trip ☐ Interest_____

Lab Assistance ☐ Activity_____

Other ☐ _____

_____

Send To: John Michel
c/o Davis Elementary

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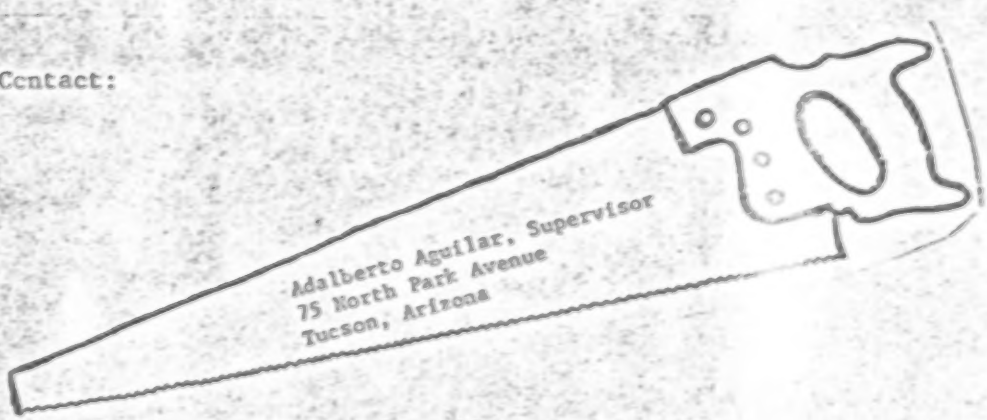
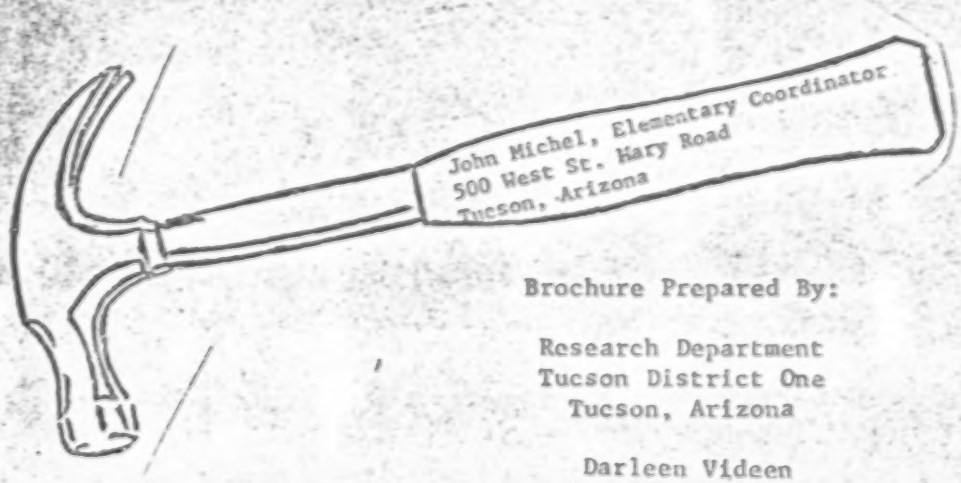
For Further Information Contact:





Brochure Prepared By:

Research Department
Tucson District One
Tucson, Arizona

Darleen Videen

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EXEMPLARY VOCATIONAL EDUCATION PROGRAM

Description

The program was initiated in September, 1971 in the Model Cities area with Office of Education funds. The participating schools for the first year are Davis and Roosevelt Elementary Schools, Safford and Spring Junior High Schools and Tucson High School.

The program will be expanded to involve five Model Cities elementary schools, during the 1972-73 school year.

Goal

The focus of the program is to equip students with knowledge and experience so that they will have an entry level salable skill.

Objectives

1. Elementary students (grades pre-K-6) will know about careers as outlined in the program. This will be measured by the instruments provided in the program and the percentage of students accomplishing the program objectives will be reported by level and school.

2. Junior High students (grades 7-8) will know characteristics of the vocations in at least one career cluster after participation in each mini course. This will be measured by instruments provided in the mini courses.

3. High School students (grades 9-12) will become more aware of the career applicability of the skills they learn in the regular curriculum (English, mathematics, science, social studies) as measured by teacher made instruments.

4. High School students (grades 11-12) will learn the skills needed to have a salable entry level skill through learning in school and experience on the job. This will be measured by employee observations as reported to the counselor upon completion of the 11th and 12th grades.

Activities

1. The teachers who volunteer to participate in the program will assist in the construction of program methods and materials to be used at all levels. This will be done through their workshop participation, as measured by a written program and/or instructional ideas.

2. Students will learn through:

Field trips	Role Playing
Resource Personnel	Game Activities
Films and Filmstrips	Hands-on Experience

The children have constructed the following materials through hands-on experiences:

Pencil Holders	Looms		Trivets
Bird Houses	Games		Decoupage Plaques
Airplanes	Puppet Stage		Cars
Trains		Trucks	

EXEMPLARY VOCATIONAL PROGRAM
TEACHER'S LOG

TEACHER'S NAME_____ NO. STUDENTS IN CLASS_____

WEEK OF_____
(Date)

Write in the code for time your class participated in the activity.

CODE: 1 10 min. to 30 min.
2 1/2 hr. to 1 hr.
3 Longer than 1 hr.

	Mon	Tues	Wed	Thurs	Fri
Classifying jobs in clusters or job families.					
Exhibits of tools or workers.					
Role-playing a job.					
Role-playing an interview.					
Filling out pseudo-applications.					
Drawing pictures, charts, or making materials for bulletin board.					
Hypothetical job plans or descriptions.					
Use of tools and/or equipment.					
Songs of workers.					
Games about workers (Life Career Game, charades, What's My Line, et cetera).					
Taking pictures, videotapes of workers.					
Using the newspaper to learn about workers.					
Use of SRA or other occupation kits.					
Use of library or reference books about work.					
Use of textbooks and relation to work.					
Audio tapes of work being done.					
Audio tape of interview with workers.					
Career day activities.					

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Making occupational kit to learn about a specific job or cluster.

Interviewing for classroom jobs.

Application forms for classroom jobs.

Testing (interest inventories, personality tests, et cetera).

Observation of workers in the community.

Tour of school to see workers at their jobs.

Guest speakers. (Please list name and occupation on back).

Field trips.

Day on the job for an individual.

Children assume responsibilities for classroom activities.

Work done by children (making a book, classroom newspaper, assembly line cooperation, making a product, et cetera; name activity_____.

Classroom discussions that lead to further self-development and self-knowledge.

Small group discussion for self-development and self-knowledge.

Individual conference.

Classroom activity not specified above:

_____

Mon	Tues	Wed	Thurs	Fri

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EXEMPLARY VOCATIONAL PROGRAM
Job Awareness Check List

STUDENT'S NAME_____ DATE_____

GRADE_____ TEACHER_____ SCHOOL NAME_____

For each type job check all columns which apply.

TYPES OF JOB	KNOW ABOUT	SEEN ON THE JOB	MEMBER OF FAMILY HAS THIS TYPE JOB	IN THIS JOB DOES THE WORKER		
				Use Reading	Use Math	Use other things learned in school
1. Policeman						
2. Teacher						
3. Salesclerk						
4. Miner						
5. School Principal						
6. Secretary						
7. Dentist						
8. Bricklayer						
9. Librarian						
10. Fireman						
11. Truck driver						
12. Playground Monitor						
13. Crossing Guard						
14. Plumber						
15. Maid						
16. Newspaper Reporter						
17. Nurse						
18. Lawyer						
19. Bus Driver						
20. Housework						
21. Doctor						
22. Janitor						
23. Mailman						
24. Dental Assistant						
25. Barber						
26. Cement finisher						
27. Computer Programmer						
28. Dish Washer						
29. Pharmacist						
30. Cook						

EXEMPLARY VOCATIONAL PROGRAM
Job Awareness Check List

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For each type job check all columns which apply.

TYPES OF JOB	KNOW ABOUT	SEEN ON THE JOB	MEMBER OF FAMILY HAS THIS TYPE JOB	IN THIS JOB DOES THE WORKER		
				Use Reading	Use Math	Use other things learned in school
31. Jeweler						
32. Pilot						
33. Veterinarian						
34. Architect						
35. Senator						
36. Carpenter						
37. Repairman						
38. Archeologist						
39. Artist						
40. Baker						
41. Mathemetician						
42. Bank Teller						
43. Accountant						
44. Waitress						
45. Editor						
46. Author						
47. Forest ranger						
48. Coach						
49. Travel Agent						
50. Biologist						
51. Factory worker						
52. Poet						
53. Bookkeeper						
54. Model						
55. Seamstress						
56. Receptionist						
57. Actor-Actress						
58. Stewardess						
59. Mechanic						
60. Clergyman						
61. Geologist						
62. Construction worker						
63. Plumber						
64. Jeweler						
65. [illegible]						

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EXEMPLARY VOCATIONAL EDUCATIONAL PROGRAM

Elementary Teachers Workshops
May 9, 10, 1972
May 11, 12, 1972

First Day

8:45-10:00 a.m.	Orientation - presentation of program purpose and workshop objectives
10:00-10:15 a.m.	Break
10:15-12:00 a.m.	Group discussion on development of group activities in career education.
12:00-1:15 p.m.	Lunch
1:15-2:15 p.m.	Discuss record keeping activities.
2:15-2:30 p.m.	Break
2:30-4:00 p.m.	Groups by grade level for development of activities

Second Day

8:45-9:00 a.m.	General meeting
9:00-12:00 a.m.	Development of activities
12:00-1:15 p.m.	Lunch
1:15-3:00 p.m.	Development of activities
3:00-3:45 p.m.	Large group sharing session
3:45-4:00 p.m.	Evaluation of workshop

EXEMPLARY VOCATIONAL EDUCATION ELEMENTARY SCHOOL WORKSHOPS
May 8-11, 1972

Description

Two two-day workshops, one for primary and one for intermediate teachers will be held at Davis Elementary School. A teacher at each grade level from ~~Boston~~ Boyton, Drachman, Ochoa, Davis and Roosevelt Elementary Schools will meet along with resource teachers, the program staff, an evaluator from the District #1 Research Department and Dr. Pat Nash, University of Arizona consultant.

Purpose

Integration of the career education concept into the basic curriculum

Product Objective 1

Teachers involved in the Exemplary Vocational Education Program will understand the basic concept of career education as measured by their performance of 80% proficiency on an instrument developed by the inservice staff.

Process Objective 1

Teachers involved in the Exemplary Vocational Education Program will participate in a two-day workshop devoted to orienting teachers to career education. This will be measured by documentation of workshop activities.

Product Objective 2

Teachers involved in the Exemplary Vocational Education Program will develop activities and materials related to career education as measured by the number of activities developed (at least one for each teacher).

Process Objective 2

Teachers involved in the Exemplary Vocational Education Program will participate in scheduled workgroups given to development of activities and materials related to career education. This will be measured by documentation of scheduled workgroups.

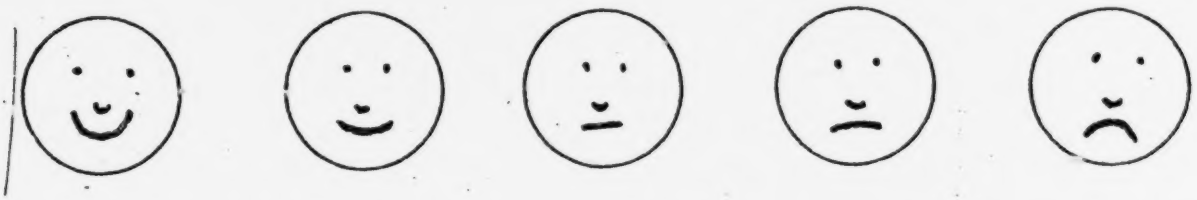
EXEMPLARY VOCATIONAL PROGRAM

WORKSHOP EVALUATION
(Teacher Opinion)

Teacher:

Please give us your opinion regarding the Exemplary Vocational Program inservice workshops. Using the rating scale of 1 - 5,

1	2	3	4	5
If you came away feeling very pleased.	If you were somewhat pleased.	You were neither pleased nor displeased.	If you had some negative feelings.	If you were extremely displeased.



	(Circle one)				
About the materials you saw	1	2	3	4	5
About the speakers you heard	1	2	3	4	5
About the uses you might make of ideas you received in the workshop	1	2	3	4	5
About the workshop in general	1	2	3	4	5
About the Careers Program in general	1	2	3	4	5

Comments:

EXEMPLARY VOCATIONAL EDUCATION PROGRAM

ACTIVITY FORM

Textbook _____ Page _____

Grade _____

Subject Area _____ Occupation _____

Concept to be attained _____

_____

_____

Activities (describe briefly) use back of page if necessary.

Materials needed _____ Time needed _____

_____

_____

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Evaluation

[illegible]

EXEMPLARY VOCATIONAL EDUCATION PROGRAM

EVALUATION FORM

Date	Activity (Title or Number)	Evaluation

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FOREWORD

Safety Education has always been a concern of all those engaged in education and has been a part of the total curricula. Providing a safe environment and developing positive safe attitudes, habits, and skills have always been important objectives. The prevention of injury to the students, teachers, and visitors; the prevention of destruction of facilities and equipment; and the proper and safe procedure in the use of hand tools and equipment are of great importance and must receive prime consideration.

This brief guide was developed to assist the teachers and students in grades K-6 that will participate in the Model Cities Exemplary Vocational Program in an effort to prevent accidents and injuries by learning the correct, safe way to handle and use tools. Please remember that it is only a guide; it is not a complete safety program nor will it answer every question or serve every need. An effective program is continuous and part of the daily teaching-learning situation.

The primary purpose of this guide is to assist in the constructional activities which will enable the children to have meaningful learning "hands-on" experiences in using materials and tools. The students will learn by doing.

THE FIVE "E's" OF SAFETY EDUCATION (1)

Engineering:	Control of physical conditions
Education:	A planned, positive approach to learning safety rules and behavior
Enforcement:	Constant insistence that safety rules are followed
Example:	The teacher as a leader and "pace-setter"
Enthusiasm:	The essential ingredient of both teacher and student

(1) Adopted from Teacher Liability in School-Shop Accidents, Dr. Denis J. Kigin, Prakken Publications, Inc., Ann Arbor, Michigan, 1963.

A sixth "E" should be added:

Evaluation:	Ways and means of improving program of safety and preventing recurrence of accidents

UNIT I

General Items

1. First Aid Kit - A first aid kit containing a complete supply of approved first aid materials must be maintained at all times.

2. Injury - All cuts, abrasions, burns, or bruises - regardless of seriousness - must be reported to teacher immediately. The teacher should inspect injury and when necessary give first aid treatment. When an accident warrants sending a student to the nurse, he should be accompanied by another student. A record of each accident where student requires nurse's attention should be kept. Injuries requiring services of a physician should be reported on the "Recommended Accident Report Form." Principal should be immediately informed of all major accidents and conform to policies of the Tucson Public Schools.

3. Fire Equipment and Fire Exits - Students should be instructed on proper escape routes in case of fire or other emergencies. They should know the location of fire protection equipment.

4. Lifting: - Children should not attempt to lift heavy objects.

5. Personal Conduct - Running, pushing, rough or boisterous play is unsafe where tools are being used. It is dangerous and must be controlled. Tossing or throwing of objects in the classroom is not permitted.

6. Storage - Store all combustible materials safely. Poisonous materials should be clearly marked, stored where it is difficult for students to obtain, handled with the precautions that are specific to that particular item, and supervised by the teacher.

7. Tool Storage - Tools should be kept in a safe place and when not in use be returned to the proper place.

8. Housekeeping - Keep floors clean of oily substances and articles that might result in a fall. All spills should be wiped up immediately. Keep all oily rags in a container.

9. Nails and Tacks - Do not hold or place nails, tacks, or screws in mouth.

10. Protruding Nails - Boards with protruding nails, brads, or screws should be removed to prevent possible injury.

11. Scraps - Do not permit scraps to accumulate on the floor; provide a scrap box.

UNIT II

General Safety in Use of Hand Tools

The correct way is the safe way! A "healthy respect" for tools is desired, not fear!

1. Use of Tools - How to use tools correctly and safely should be taught before a tool is used. Instruction should be repeated as often as needed.

2. Sharp Edged Tools - When using sharp edged tools do not cut towards the hand or body.

3. Report - Report anything to your teacher that may lead to an accident, including dull and broken tools or equipment. These should be corrected immediately or replaced.

4. Carrying Tools - Cutting edge tools or tools with sharp points should be carried with the points and cutting edge down. These tools are not to be carried in your pockets.

5. Handing Tools to Others - Tools should be handed to others in a way that neither you nor the other person will be forced to handle a cutting edge.

6. Holding Work - Work should be securely held down with a clamp or vise when being worked on.

7. Use of Tools - Tools are made for a job; use them for this purpose only. The use of the tools should be supervised carefully.

UNIT III

Student Participation in Safety Programs

There are many opportunities for the students to participate actively and to act positively in a safety program. Some of these activities could be:

1. Prepare safety slogans and posters.

2. Form a school safety committee.

3. Have a safety suggestion box.

4. Study traffic safety.

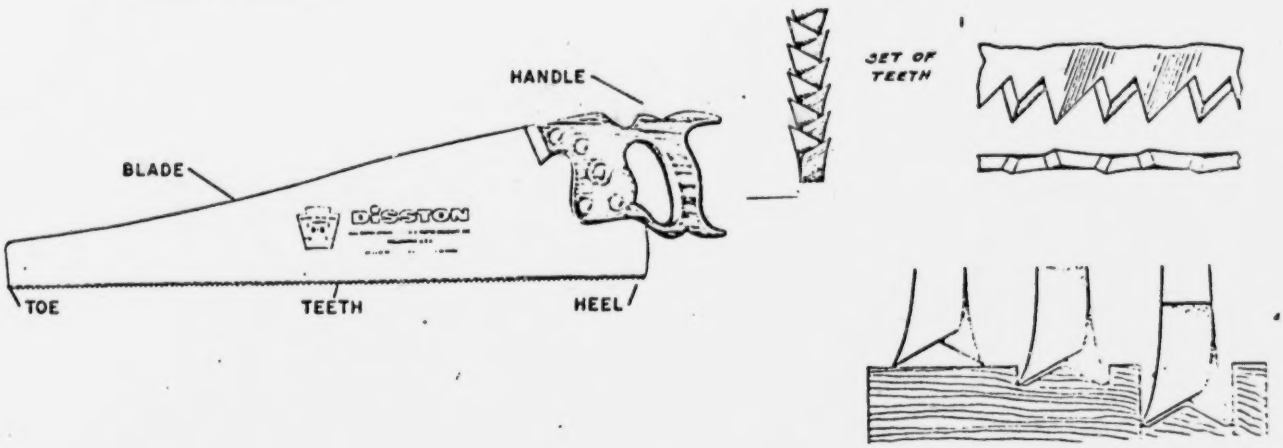
5. Provide for presentations by firemen, policemen, traffic patrol, etc.

UNIT IV

Individual Hand Tools - Identification

I. Hand Saws - There are many varieties and shapes of hand saws, each made to do a job. Teeth filed on each saw are the cutting edges. Saws are available with large or small teeth and in various lengths. In general, the large teeth are used to cut soft materials and the small teeth for hard materials and finish work.

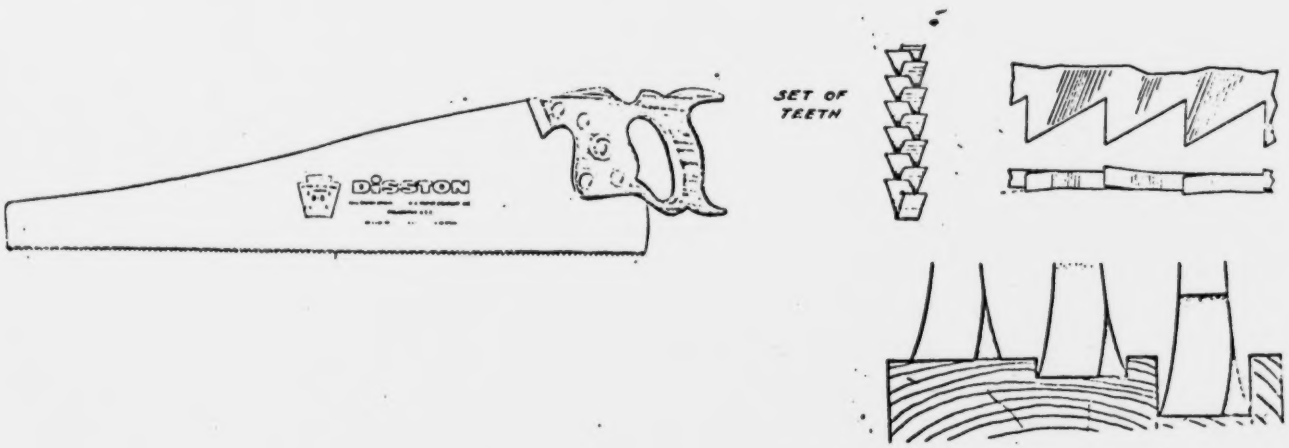
A. Cross-cut Saw



The cross-cut saw is designed to cut across the grain (fiber) of wood. Note that the teeth are sharpened like a series of knives that enables it to make a clean cut when used to cut across the grain.

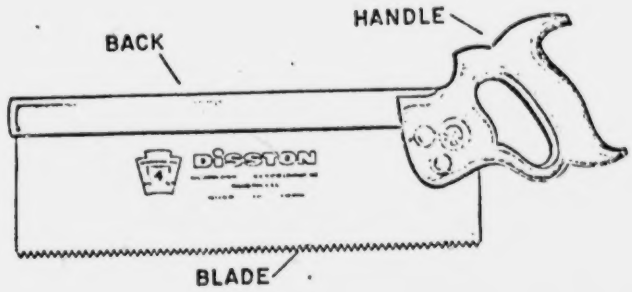
"Points to the inch" is the term used to designate the size of the teeth in a saw. The fewer the number of teeth to the inch the rougher the cut; the greater the number of teeth the smoother the cut. If used to cut with the grain, it will be slower than necessary.

B. Rip Saw



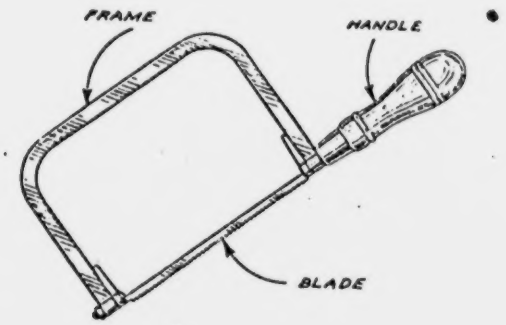
The rip saw looks like a cross-cut saw with the exception of how the teeth are filed and shaped. This saw is designed to cut with the grain of the wood. The teeth are filed and sharpened to resemble small chisels which enables it to cut quickly and cleanly with the grain. If used to cut across the grain, the cut will be ragged.

C. Back Saw



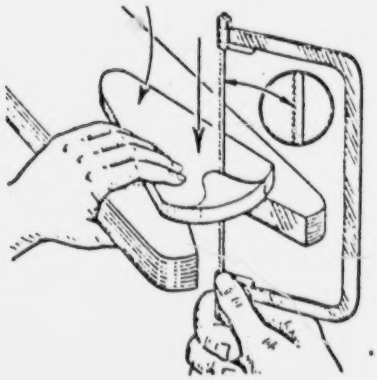
The back saw is used for fine work. The fine blade and teeth leave a fine surface. The teeth are sharpened the same as the teeth of a cross-cut saw. The blade is reinforced with a heavy metal band that helps support the blade. A high degree of control can be maintained with this saw in cutting with or across the grain.

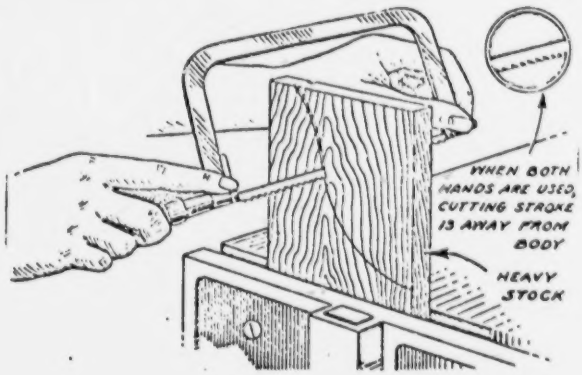
D. Coping Saw



The coping saw is designed with a thin blade in order to cut irregular curves and may be adjusted to any angle in the frame. The blade may be inserted to cut either on a "pull stroke" or a "push stroke."

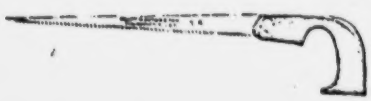
Pull Stroke - down stroke. Push Stroke - away from body.



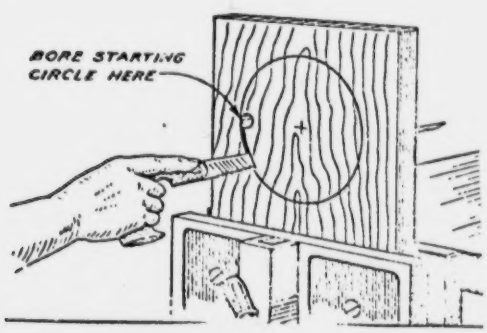


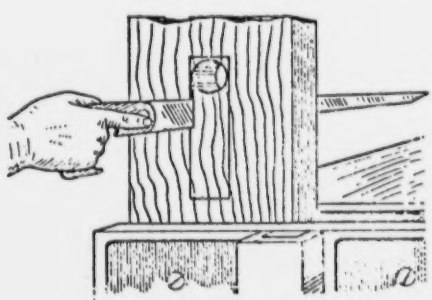
Care must be taken in purchasing the correct blades.

E. Keyhole Saw



The Keyhole saw is made with a narrow, tapered blade which is attached to the handle. It is possible to have various length and width blades that may be interchanged. It is used to cut irregular curves in heavy stock and to cut interior circles or curves in a surface. The cut is usually started from a hole based near the line to be cut. The saw is usually made to cut only on wood.



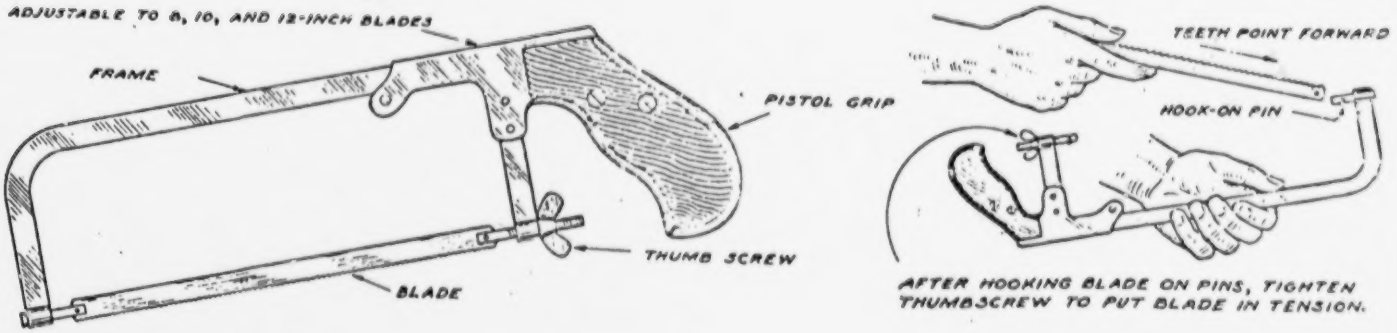


F. Compass Saw

The compass saw is similar to a keyhole saw except that the blades are larger.

G. Hack Saw

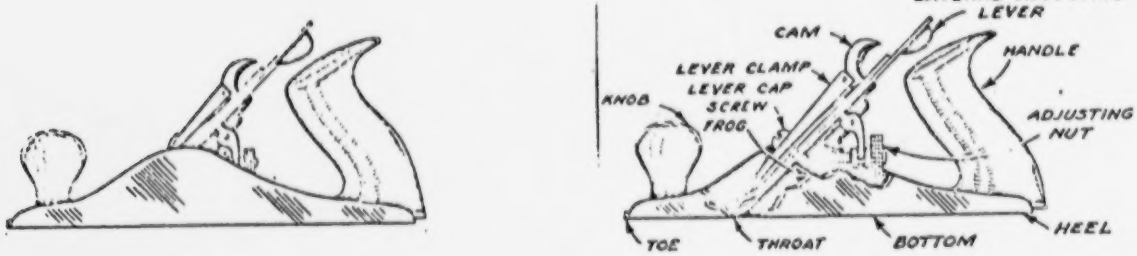
The hack saw is primarily designed to cut metal. The blades are available with fine (34 teeth), medium (24 teeth), or coarse (18 teeth), and also in different lengths. When cutting thin metal a fine blade is used.



II. Planes

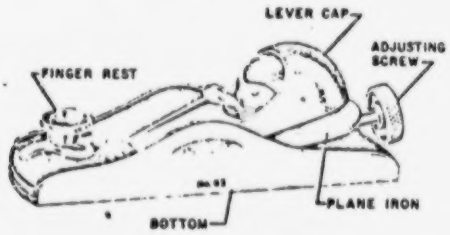
A. Bench Plane

The bench plane may be purchased in different lengths. It is a special tool with a cutting blade for smoothing and removing wood as shavings. It takes patience to learn to adjust, use, and keep it in good condition.



B. Block Plane

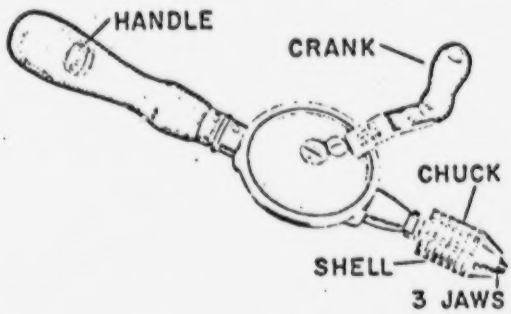
The block plane is a small plane having a low angle, single plane iron. It is usually held in one hand, is light, and can be handled easily by children.



III. Boring and Drilling Tools

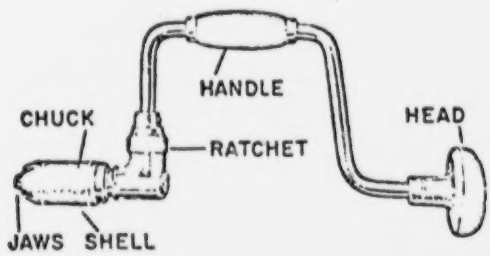
A. Hand Drill

The hand drill is used to bore small holes with a twist drill needed to install nails, screws, and small bolts.



B. Brace

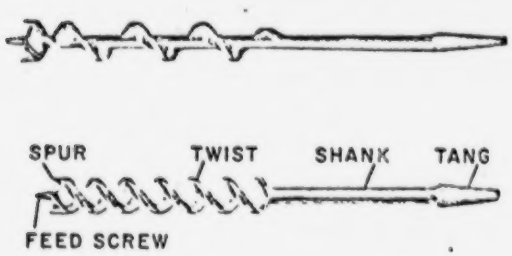
The brace is a tool used to hold auger bits for drilling larger holes than can be drilled with a hand drill. It is also used with a screw driver bit or a countersink.

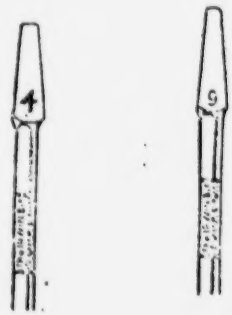


C. Bit

A tool used to bore holes in wood, metal, or plastics.

1) Auger bit - usually ranging from 1/4" to 1" by 16th. The number stamped on the tong designates the size in 16ths of an inch. Examples: 4 means 4/16" or 1/4"; 9 means 9/16". Used on woods or soft materials only.





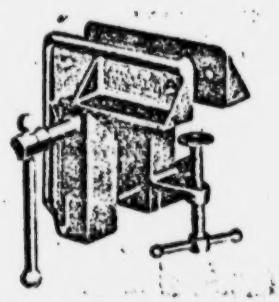
2) Straight Shank Drills - Used to bore small holes and can be held in hand drill or brace. These may be used on metal. Sizes from 1/64" to 1/2".

3) Countersink Bit - Commonly called the countersink. It is used to shape the top of a hole to receive a flat head screw. The head of a countersink bit is tapered to a point, or conical shape. The rose type of countersink, illustrated, is the one most commonly used and may be used for countersinking holes in soft metal as well as in wood.

IV. Other Hand Tools

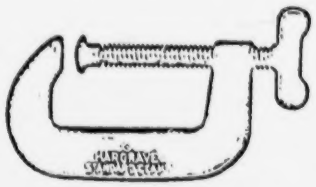
A. Woodworking vises

The vise is used to hold materials firm.



B. C-Clamps

A c-clamp is a holding and clamping device. C-clamps come in many sizes. A 4" c-clamp designates the opening size of the clamp.



C. Files and Rasps

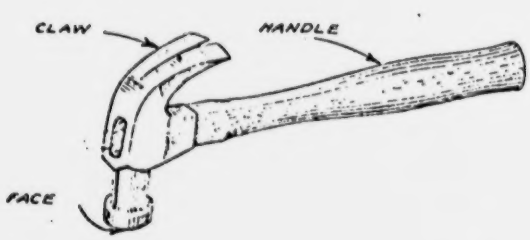
There are many shapes and sizes of files and rasps. They can be flat, half round, round, triangular, or square. They may be rough, medium, or fine. A file is usually not as coarse as a wood rasp. They are used to shape, form, or smooth materials. Files may be used on metals. Files should never be used without a handle.

D. Card File

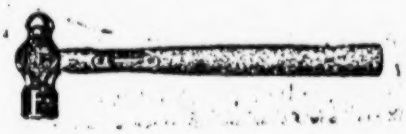
A card file is used to clean files and rasps.

E. Hammers

1) Claw Hammer - A claw hammer is used to drive or pull nails. Handles may be of wood or metal and come in various weights.

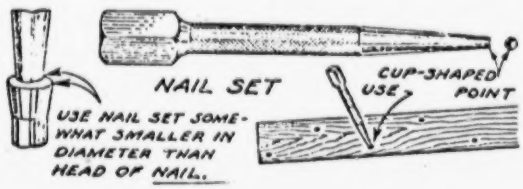


2) Ball Peen Hammer - A ball peen hammer is used mostly when working on metal. Has a ball-shaped head on one end.



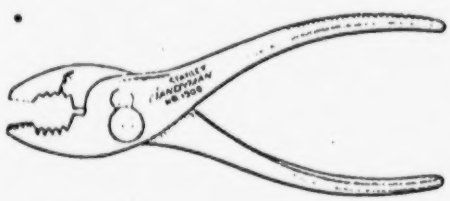
F. Nail Set

A nail set is a small metal punch with a cupped end used to sink the head of a nail below the wood surface. The cupped end prevents it from slipping off the head of the nail.



G. Pliers

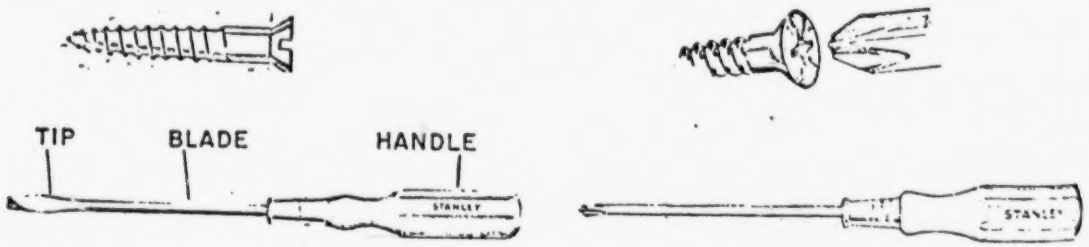
1) Combination - A tool used for holding or bending pieces of metal. It is adjustable by means of a slip joint and has serrated jaws to help in holding materials firmly.



2) Side Cutting - Often referred to as electrician's pliers. They are used for holding materials and for cutting wire.

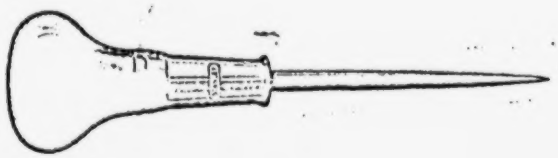
H. Screw Drivers

Screw drivers are used to install screws and bolts. They come in various lengths and sizes and in two varieties. The plain screw driver is used for the slotted-head wood screws, and the Phillips screw driver for the Phillip screws.



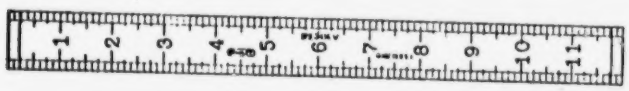
I. Scratch Awl

A tool that must be handled carefully. It is helpful in starting a hole so that the boring or drilling bits will have a center to begin with. Also used to scribe accurate lines or locate points.



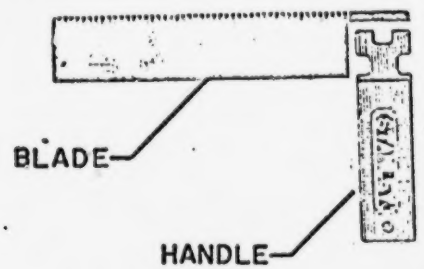
J. Bench Rule

A measuring tool. May be 12", 24", or 36" long.



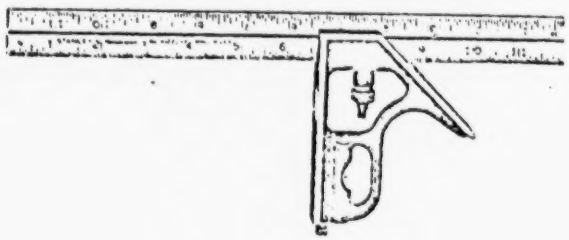
K. Try-Square

A tool with a blade that can be used for measuring and to check squareness of stock.



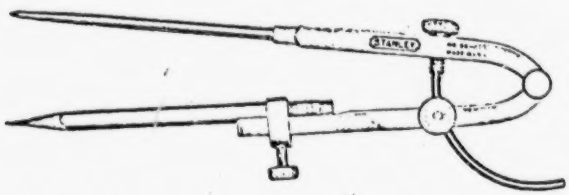
L. Combination Square

A measuring tool with the blade that slides through the handle. Is usually fitted with a level and may be used to check squareness or 45° angles.



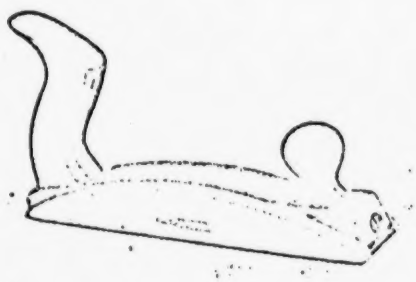
M. Dividers

A divider is a tool used to draw circles, or part of circles (arcs), or for stepping off equal distances. May have a pencil on one end.



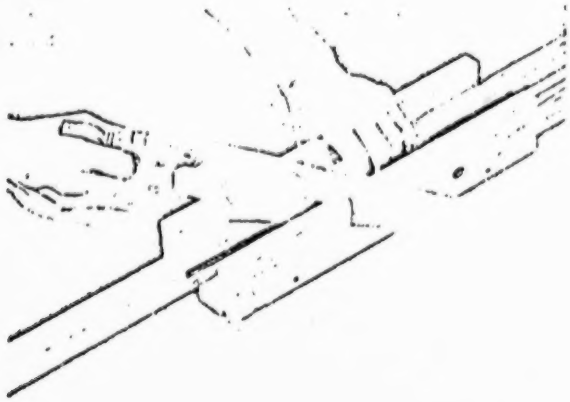
N. Surform Tools

A surform is a forming tool with hardened and tempered tool-steel cutting blade. Used similarly to a wood file or rasp. They come in two basic forms, a file type or a plane type.



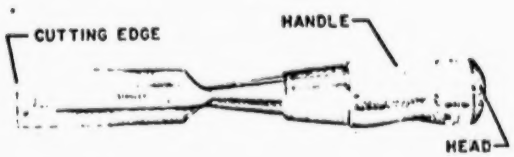
O. Miter Box

A miter box is used to make a square or 45° cut with a back saw or a cross-cut saw.



P. Wood Chisels

Wood chisels are used to shape and fit parts. They have a sharp, exposed blade and must be handled carefully.



UNIT V

How to properly use hand tools.

A. Hand Saws

1. Holding work - material that is to be sawed must be held securely by either a vise or clamped to a bench top. Work should never be held in the hand or on any part of the body when cutting.

2. Correct stance - The student's feet should be planted firmly and spread slightly at a comfortable stance.

3. It is recommended that the beginning students use a guide block clamped to the wood where the cut is to be started. After the cut is started, the back of the saw is slowly lowered until the saw is completely across the material being cut.

4. Hand position - The left hand is placed on the work or bench away from the cutting edge of the saw.

5. Starting the cut - The saw cut is started with short and slow back strokes.

6. Saw strokes - The saw stroke should be slow and have regular rhythm. Force should not be used while cutting. The entire length of the saw should be used while cutting.

7. Ending the Cut - To prevent a rough breakthrough, most of the saw's weight should be withheld when approaching the end of the cut.

8. Saw Maintenance - Saws must be sharp to be safe. Do not lay a saw down teeth first and don't store a saw on its teeth. Nails and screws should be removed from the cutting path of the saw.

B. Hand Planes

1. The block plane is small and easy to handle. This tool was designed to be held in one hand by an adult, but small children may find it desirable to use both hands.

2. Bench Plane - The bench plane was designed to be held with both hands. The primary function of a plane is to produce straight, flat, smooth surfaces on wood.

3. Stance - When using this tool the student should be taught to stand with his feet at least shoulder width apart and use his body weight and leg muscles to force the plane through the wood.

4. Plane Strokes - When planing edge grain, downward pressure should be applied to the front of the plane at the beginning of the cut. When the entire plane is on the surface of the wood, even, downward pressure is applied to the front and back end of the plane as the stroke is made. On ending the cut, pressure is released from the front end but maintained on the back end until the stroke is completed.

5. When planing end grain, the plane should be started at the outside edge and pushed toward the center. By planing toward the center and not permitting the plane iron to come in contact with the edge grain, the problem of damaged edged grain can be avoided.

C. Boring and Drilling Tools
Brace and Hand Drill

When boring a hole in wood, the stock should be held in a vise in either a horizontal or vertical position. It should be firmly clamped to a piece of waste stock that will support the wood around the edges when the bit cuts through the opposite side.

If it is not convenient to "back up" the stock with scrap wood, you can bore from one side until the feed screw just starts to come through, then reverse the stock and finish the hole from the other side.

When boring, the brace or drill handle is turned clockwise. Keep the bit at right angle to the wood being bored. Use extra care when starting a hole in plywood or jaw will splinter the veneer around the edge of the hole. A clean cut hole in plywood is accomplished by starting the hole with slight forward and backward cuts with the brace and bit until the surface veneer is completely cut.

D. Hammers

The hammer is used in driving nails. The nail is held between the thumb and forefinger. Tap the nail lightly to start it into the wood. Take your hand away from the nail. Drive the nail by swinging the arm and hammer as a unit. Use just a little wrist movement. Strike the nail with firm blows, keeping your eye on the nail.

E. Files, Rasps, Surform Tool

Files and rasps are never used without handles. The tang or sharp end of the file can cause serious injury.

When filing hold the handle of the tool in your right hand and the point in your left. Apply moderate pressure on the forward stroke, making a shearing cut at a slight angle. Lift the file off the material on the return stroke and repeat the operation.

Always keep the teeth clean with a file card.

The surform tool is used as you would a rasp or file. For best results apply light, even pressure against the wood. The surform produces a smooth, even surface.

EXEMPLARY VOCATIONAL PROGRAM
OCCUPATIONS RATINGS
Junior High and High School Students

STUDENT'S NAME_____ DATE_____

GRADE_____ TEACHER_____ SCHOOL NAME_____

Below are listed several occupations. For each, you will answer three questions:

A. What prestige or social status do you feel most people give this occupation?
B. How much personal satisfaction would this occupation give the employee?
C. To what extent is this occupation essential to the functioning of society?

Please circle your chosen answers.

1. Sales clerk

1A. Prestige or social status:	1B. Personal satisfaction:	1C. Essential to society's functioning:
1-very high	1-none	1-very essential
2-high	2-little	2-quite important
3-medium	3-some	3-important
4-low	4-much	4-useful
5-very low	5-very great	5-little use
		6-no use

2. Librarian

2A. Prestige or social status:	2B. Personal satisfaction:	2C. Essential to society's functioning:
1-very high	1-none	1-very essential
2-high	2-little	2-quite important
3-medium	3-some	3-important
4-low	4-much	4-useful
5-very low	5-very great	5-little use
		6-no use

3. Truck driver

3A. Prestige or social status:	3B. Personal satisfaction:	3C. Essential to society's functioning:
1-very high	1-none	1-very essential
2-high	2-little	2-quite important
3-medium	3-some	3-important
4-low	4-much	4-useful
5-very low	5-very great	5-little use
		6-no use

4. Plumber

4A. Prestige or social status;
1-very high
2-high
3-medium
4-low
5-very low

4B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

4C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

5. Newspaper Reporter

5A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

5B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

5C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

6. Lawyer

6A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

6B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

6C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

7. Janitor

7A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

7B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

7C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

8. Dental assistant

8A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

8B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

8C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

9. Computer programmer

9A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

9B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

9C. Essential to society's functioning:
1-very sssential
2-quite important
3-important
4-useful
5-little uee
6-no use

10. Restaurant dishwasher

10A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

10B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

10C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

11. Pharmacist

11A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

11B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

11C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

12. Barber

12A. Prestige or social status;
1-very high
2-high
3-medium
4-low
5-very low

12B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

12C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

13. Short order cook

13A. Prestige or social status:
1-very high
2-high
3-medium
4-low
5-very low

13B. Personal satisfaction:
1-none
2-little
3-some
4-much
5-very great

13C. Essential to society's functioning:
1-very essential
2-quite important
3-important
4-useful
5-little use
6-no use

Directions: Below are listed many kinds of jobs that people may have. Read each job and decide if someone in Pima County would be able to do that kind of work.

If you think someone in Pima County might have that job, put an X in the box for YES/ X /.

If you do not think someone in Pima County would have that job, put an X in the box for NO/ X /.

If you do not know whether someone in Pima County might have that job, put an X in the box marked ?/ X /.

Carpenter	YES/ /	NO/ /	?/ /	Golf Course Manager	YES/ /	NO/ /	?/ /
Sea Captain	YES/ /	NO/ /	?/ /	Oil Rigger	YES/ /	NO/ /	?/ /
Mushroom Planter	YES/ /	NO/ /	?/ /	Typesetter	YES/ /	NO/ /	?/ /
Bank Teller	YES/ /	NO/ /	?/ /	Longshoreman	YES/ /	NO/ /	?/ /
Cattle Feeder	YES/ /	NO/ /	?/ /	Coal Miner	YES/ /	NO/ /	?/ /
Copper Miner	YES/ /	NO/ /	?/ /	Orange Grower	YES/ /	NO/ /	?/ /
Auto Assembly Lineman	YES/ /	NO/ /	?/ /	Marine Biologist	YES/ /	NO/ /	?/ /
Pilot	YES/ /	NO/ /	?/ /	Gift Shop Clerk	YES/ /	NO/ /	?/ /
Pest Controller	YES/ /	NO/ /	?/ /	City Planner	YES/ /	NO/ /	?/ /
Lobsterman	YES/ /	NO/ /	?/ /	Rice Planter	YES/ /	NO/ /	?/ /

School is a drag for Clarence. The best part of the day is lunch. He rarely does his work and if he tries to do something, the teacher usually has to make him do everything again. Sometimes the other kids in the class laugh at him when he acts silly and the teacher gets mad. At home he likes to help his mother by cutting grass and fixing things like leaky faucets, lamps, and lawn mowers. He builds model airplanes and keeps taking things apart and putting them back together. What kind of job do you think Clarence might have when he grows up? Check three jobs for Clarence:

_____Office manager	_____Teacher	_____Airplane mechanic
_____Plumber	_____Radio-TV repairman	_____Bank teller
_____Doctor	_____Coach	_____Architect
_____Accountant	_____Geologist	_____Veterinarian

Richard is outstanding in baseball, well-behaved, and has a pleasing appearance. Everyone likes him. He is described as being "fair" with everybody. He is often chosen as team captain and class officer. He makes pretty good grades in all his subjects. In his spare time he likes to teach baseball to the younger children in his neighborhood. What kind of job do you think Richard might have when he grows up? Check three jobs for Richard:

_____Professor	_____Policeman	_____Jeweler
_____Pilot	_____Librarian	_____Coach
_____Editor	_____Artist	_____Office manager
_____Nurse	_____Secretary	_____Interior decorator

Directions: Read these stories about students your age. Then for each student, check three jobs that you think the student might have when he grows up.

Tony is very quiet and shy. His grades are average. He loves working with his hands and enjoys showing friends how to whittle or make models from scrap lumber. After school he enjoys helping his father around the house and has built bookends and birdhouses. Sometimes his father allows him to work on the family car and Tony thinks that is a lot of fun. What kind of job do you think Tony might have when he grows up? Check three jobs for Tony:

_____Senator	_____Actor	_____Car salesman
_____Geologist	_____Mechanic	_____Secretary
_____Carpenter	_____Editor	_____Clergyman
_____Teacher	_____Accountant	_____Radio-TV repairman

Sonia has a great smile and always takes time to be a friend to her classmates. She speaks both English and Spanish well. She is a good reader and enjoys giving book reports. Her grades in English are good and her other grades are average. What kind of job do you think Sonia might have when she grows up? Check three jobs for Sonia:

_____Secretary	_____Artist	_____Librarian
_____Baker	_____Doctor	_____Stewardess
_____Waitress	_____Factory worker	_____Maid
_____Archeologist	_____Bank teller	_____Dressmaker

GO ON TO THE NEXT PAGE.

COMMUNICATIONS are vital to the smooth running of a hotel, these Mission View Elementary School fifth and sixth graders learn as they gather around the letter box at the Sheraton Pueblo Inn. From left, Lucy Camacho, Betty Salinas and Yolanda Madril learn about mail operations from Mark Gross, assistant manager.

Kids Get Inside View Of World Of Work

By CYNTHIA BANERJEE
Star Staff Writer

World of Work, one facet of a summer reading program in Tucson School District One, is relevant to the pupils — both now and for the future.

This program is part of the five-week 1972 Title I Summer Reading Improvement Project, directed by Bill Braucher, principal of Carrillo Elementary School.

The children, about 900 total in 10 schools, were found to need special help in reading on the basis of tests and teacher recommendations. The bulk of their summer work is spent in the classroom — working with a reading teacher, delving into music or art and studying in the library.

But for one week they participate in World of Work, highlighted by a visit to one of 10 motels and hotels. There they meet people at work in a wide range of professions and jobs. They also see the ever-present need for reading knowledge — menus, message blackboards, checklists and mailboxes.

During the week when their school is involved in World of Work, the program replaces the children's music-art period. On Monday they take a pre-test of their knowledge of common occupations, play games, identify jobs by occupation related hats the teacher shows them. On Tuesday they plan for their trip to a hotel and hear about the people and jobs they will see.

Pupils from two schools a week visit the hotels, grades 2, 3 and 4 on Wednesdays and grades 5 and 6 on Thursdays.

On Friday, the children have a "hands-on" experience of making wooden trays similar to those used by some restaurants. This way, "the children learn to take measurements — the value of arithmetic in daily life," said John Michell, Model Cities Exemplary Vocational Education Program resource person, who acted as a consultant to the Title I reading program.

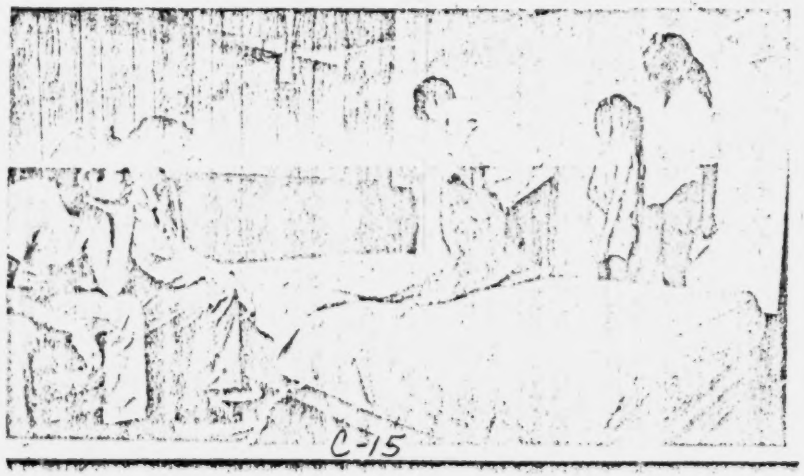
The trays, when finished, measure 10 by 12 inches and have wooden handles at each end. After finishing the woodworking part, the children are encouraged to decorate the trays with their own designs. After they finish, they can take the tray home.

How successful is the program? Braucher says the program is in its second year, and he measures its success by two criteria. One is parent enthusiasm. Like all Title I programs, it must be approved by a parents advisory board. The year, the board requested the program be held again.

"We found a marked in-

(Continued On Page 5C)

A BIG COMPUTER impresses Borton Elementary pupils visiting the Ramada Inn as part of the World of Work program. With computer operator Anthony McCune are, from left, Deborah Grant, James Castro and Richard Lopez.



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THE ARIZONA DAILY STAR

Hotel Tour Shows Pupils Need For Reading

(Continued From Page 1C)

crease in vocabulary, based on the tests the children were given at the beginning and end of the program. In a program of this sort, it's difficult to measure improvement in comprehension over such a short time," Braucher said.

One recent tour of the Sheraton Pueblo Inn was typical. About 30 children and four teachers arrived in the lobby at 9:45 a.m. Various employes showed them the workings of the switchboard, maintenance, laundry and housekeeping rooms, the whirlpool bath and swimming pool, several types of rooms and suites, the kitchen and outside grounds.

Each child delighted in being allowed to take ice from a big ice machine, rolling on a waterbed in one of the suites, and being given pens, stickers and a hotel directory to take home. The tour ended about 11:30 a.m.

"This is something the children really relate to," said Barbara Young, one of the two World of Work teachers. "Some of the jobs they see are jobs they can envision themselves taking." They see a realistic side of work. For instance, a group visiting one hotel talked with a dishwasher who said he hated his job; another group at another hotel met a gardener who was unenthusiastic about his job.

At the Desert Inn, the children met a movie casting agent who was staying there. He encouraged them to try out for bit parts. At the Ramada Inn another group met three airline pilots and some stewardesses who were checking out just as they came into the lobby.

"It broadens their knowledge — a whole new spectrum of vocabulary," said Mrs. Young. "One group, which was typical, had 45 students. Of those, 42 had never before visited a hotel and 40 had never been in a restaurant."

Braucher, Michell and Mrs. Young all had praise for the hotels and motels. "They all treat the kids so well and make them feel really important. They're all so nice," Mrs. Young said.

Hotels and motels participating in the program are the Desert Inn, Tucson Inn, Aztec Inn, Ramada Inn, Howard Johnson's Motor Lodge, the Spanish Trail Motel, the Sands Motor Hotel, the Plaza International Hotel, Pioneer International Hotel and the Sheraton Pueblo Inn.

Elementary schools were the program is conducted are Carrillo, Richey, Manzo, Davis, Menlo Park, Drachman, Ochoa, Mission View, Borton and Holladay.

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APPENDIX D

Title I Reading Program Schedule

HOTEL-RESTAURANT LETTER

Dear Sir,

Thank you for being part of Watson Public Schools summer reading program. The boys and girls who will be participating are sure to gain a great deal from the experience you are providing by making it possible to have an in-depth field trip to your hotel.

We are studying the World of Work and consequently our main area of interest will be the people who make the hotel work. We are including a list of the various individuals we would like to speak with during our visit. The children are from 6-12 years of age and will want to know all about the jobs people fill. We hope you'll be able to make arrangements for your staff to speak with the children and to let them see the workers in action .

Your cooperation is greatly appreciated by all of us who care about children! Please let us know if you have any questions. Our date to visit you will be _____.

We're looking forward to an educationally rewarding and fun trip to your hotel.

Sincerely,

John Michel

FIELD TRIP SCHEDULE

Schools	Schools
Week 1--June 19-23--Richey Wed. 6/21--Tucson Inn Thurs. 6/22--Desert Inn	Week 1--Drachman Wed. 6/21--Plaza Int. Thurs. 6/22--Pioneer
Week 2--June 26-30--Manzo Wed. 6/28--Aztec Inn Thurs. 6/29--Ramada	Week 2--Mission View Wed. 6/28--Desert Inn Thurs. 6/29--Sheraton
Week 3--July 4-7--Davis Wed. 7/5--Howard Johnsons Thurs. 7/6--Tucson Inn	Week 3--Borton Wed. 7/5--Ramada Thurs. 7/6--Sheraton
Week 4--July 10-14--Menlo Park Wed. 7/12--Spanish Trail Thurs. 7/13--Sands	Week 4--Ochoa Wed. 7/12--Plaza Thurs. 7/13--Pioneer
Week 5--July 17-20--Carrillo Wed. 7/19--Howard Johnsons Thurs. 7/20--Aztec	Week 5--Holliday Wed. 7/19--Spanish Trail Thurs. 7/20--Sands

Busses will arrive at your school at 9:00 a.m. After attendance is taken in your home room, please excuse students for their field trip.

WORLD OF WORK--TEACHER SCHEDULE

Miss Randee Mur--Teacher
Miss Joette Pulliam--Aide

SCHOOLS

Week 1--June 19-23--Richey
Week 2--June 26-30--Manzo
Week 3--July 4-7--Davis
Week 4--July 10-14--Menlo Park
Week 5--July 17-20--Carrillo

Mrs. Barbara Young--Teacher
Miss Lisa Sorrells--Aide

SCHOOLS

Week 1--Drachman
Week 2--Mission View
Week 3--Borton
Week 4--Ochoa
Week 5--Holladay

CAREER EDUCATION PROGRAM OUTLINE

TUESDAY--Student Awareness of Careers--"What is the World of Work?"

A. Career Education Questionnaire--The objective of this questionnair will be to test the child's present knowledge of career ed., with emphasis on restaurant and hotel work. The questionnaire will give our field trip more meaning,as we will have a working indication of their awareness of hotel and restaurant careers.

B. Feltboard Activity--Discussion with children through the use of felt figures which deal with an assortment of careers.

C. Tools of the Trade Game--For stimulation of children's interest. Various tools will be shown with children guessing which careers use the tools, and to expand their knowledge of the tools actually used in work.

D. Discussion of Parent Occupation--This activity will be the 1st step in the child's awareness of careers.

WEDNESDAY--Setting the mood for the hotel-restaurant field trip.

A. Filmstrip dealing with hotels and restaurants followed by a discussion of the visual aide.

B. World of Work Book--A coordination of world of work with reading and writing. Children will make their own book of people at work and will label each picture with the appropriate career.

THURSDAY--Primary field trip to hotel and restaurant.

THURSDAY--Upper elementary trip to hotel and restaurant.

FRIDAY--A hands on wood experience. This is the culminating activity, where children's hands create a tool used by the workers' hands. Children will all make wooden trays which are used in the following careers:

Bus Boy	Bar Maid
Waitress	Bartender
Room Service	Maid
Pool Service	Dishwashers
Cooks	

B. Follow-Up Career Education Questionnaire--The objective of this questionnaire is to see student progress in knowledge of career ed; emphasis on hotels and restaurants.

CAREER PROGRAM
In Depth Hotel Field Trip

1. Parking attendant
2. Registration desk:
   a. attendant
   b. phone operator
3. Bell boys
4. Public relations people
5. Maids
6. Maintenancepeople
7. Waitresses
8. Bus boys--Bell Captain
9. Hostess
10. Cooks
11. Dishwashers
12. Shopkeepers
13. Groundkeepers
14. Bar tender
15. Secretaries

Points of Interest
*Swimming pool (pumps and equipment)
*Air conditioning units
*Parking lot
*Switchboard
*Elevators
*Curio Shops
*Maid's room
*Storage closets
*Kitchen
*Beauty Shop
--Concerned with the world of life which concerns the world of work.
--Relationship between education and employment.

Questions
A. Jobs you perform in your work?
B. Salary hours worked
C. Skills necessary--training
D. Drawbacks--benefits
E. Years in present occupations
F. Working conditions
G. Tools used
H. How hired--by whom?
I. Security

DON'T MISS the BUS !!!

The students on our class are studying about the importance of work. Along these lines, were going on an exciting bus trip to_____

_____

on_____

Please join your child on this trip to make it a learning and fun experiences for both of you. Come and see [illegible] EDUCATION AT WORK.

To make the trip even better, we'll have a free snack in the hotel restaurant. Come and get [illegible] we're looking forward to reading you.

[illegible]

DATE. _____

PRE AND POST CAREER QUESTIONNAIRE

UPPER ELEMENTARY

1. Career education is: a) going to school b) playing baseball c) learning about different jobs.

2. A bell boy: a) washes dishes b) cleans blackboards c) carries people's bags.

3. A switchboard operator: a) answers the door b) answers the hotel phone c) cleans the pool.

4. The chef: a) cooks the food b) answers the phone c) waits on customers.

5. There are: a) few jobs for people in a hotel and restaurant b) many different jobs in a hotel and restaurant c) no jobs in a hotel and restaurant.

6. List three kinds of workers in a restaurant.

A.

B.

C.

7. List three kinds of workers in a hotel.

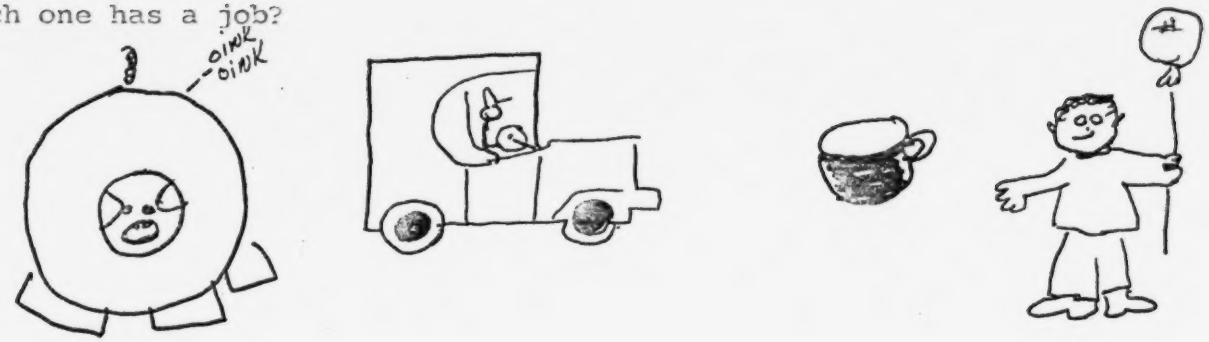
A.

B.

C.

8. What kind of work do you like best?

1. Which one has a job?



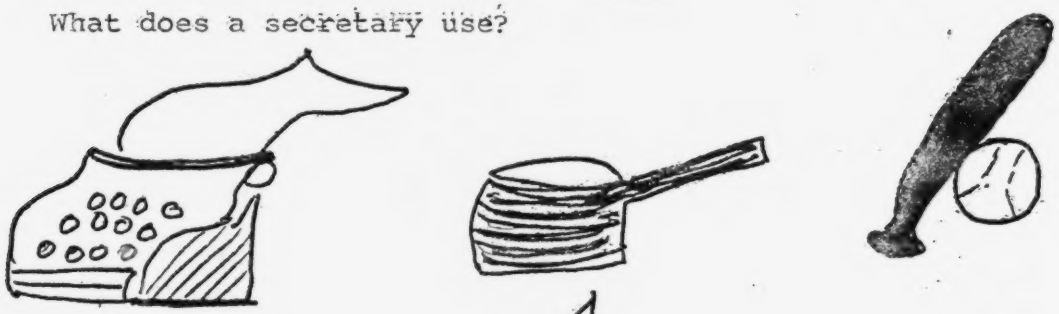
2. Which one is a bellboy?

3. Which one is a switchboard operator?

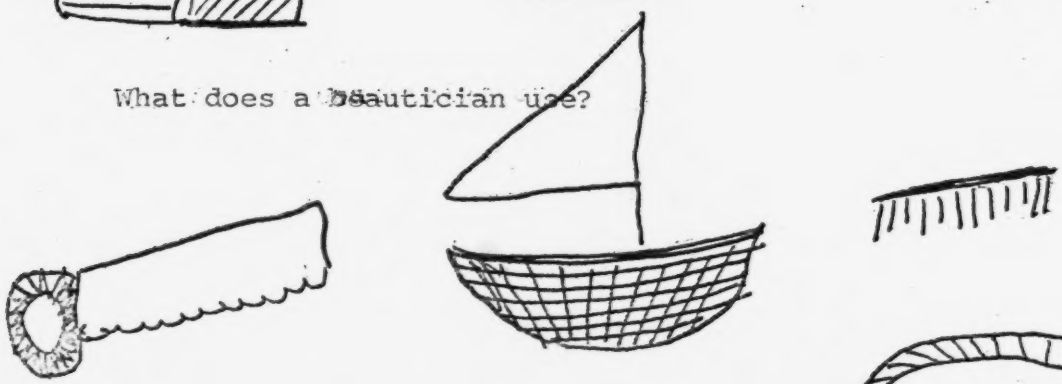
4. Which one is a chef?

5. Which one is a waitress?

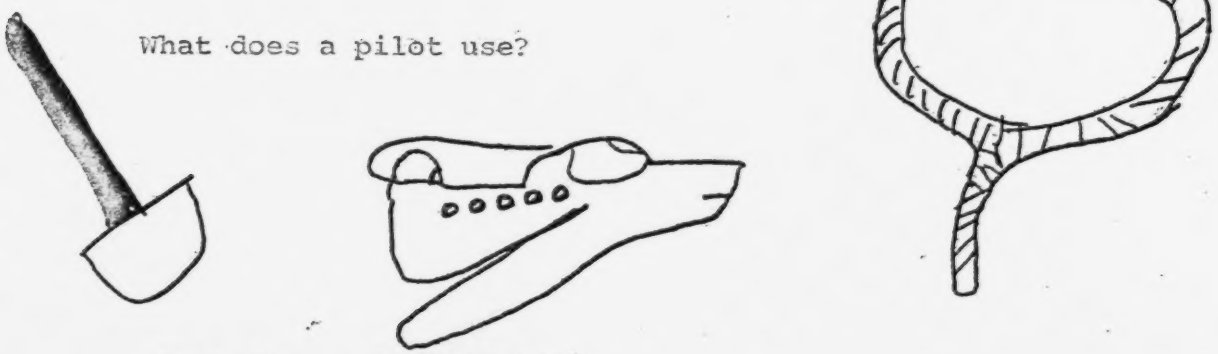
6. What does a secretary use?



7. What does a beautician use?



8. What does a pilot use?



9. What does a teacher use?

APPENDIX E

Robert Myers' End of Semester Report

Summary of End of Semester Reports

Tab	Name	Age	Class Year	Training Station	Training or Progress Rating	Remarks
B	Bedoy, G.	17	Senior	Non-Destructive Testing, DMAFB (Note 1)	Excellent	Tuition Assist. Cochise College.
C	Benitez, D.	17	Junior	Disaster Control Office, DMAFB.	Satisfactory	Resigned training Station; Family.
D	Canett, H.	19	Senior	Dental Office, Technician trainee.	Excellent	Full time position after graduation.
E	Garcia, J.	18	Senior	Dean of Students Office, Tucson High School.	Excellent	Bureau of Ind. Affairs after graduation.
F	Guzman, M.	18	Senior	Inventory clerk, auto parts store.	Excellent	Apply for scholarship, Pima College or U of A.
G	Mendoza, J.	18	Senior	Refrigeration Shop, DMAFB.	Excellent	Pima College- Refg'/Air Conditioning.
H	Monje, R.	18	Junior	Social Actions Office, DMAFB.	Poor	School/Job attendance problems.
I	Mora, N.	17	Junior	Civ. Payroll Section, Comptl Off., DMAFB.	Satisfactory	Continue in summer employment.
J	Pro, A.	17	Junior	Tech' Order Library, DMAFB.	Excellent	Continue in summer employment.
K	Redmond, R.	17	Junior	Transportation Office, DMAFB.	Marginal	Job attendance, attitude problems.
L	Russell, M.	17	Junior	Staff Judge Advocate's Office, DMAFB.	Satisfactory	Continue in summer employment.
M	Urbina, F.	18	Senior	Non-Destructive Test, DMAFB.	Excellent	Continue in summer, Cochise College (?)
N	Valencia, C.	18	Senior	Certified Public Accountant Office	Excellent	Scholarship, Univ. of Arizona
O	Valencia, R.	16	Soph.	Teacher's Aide, Roosevelt Elem. School	Excellent	Summer employment, Ariz. Hist. Museum
P	Yribe, A.	16	Note 2	Commissary Warehouse, DMAFB.	Poor	Discharged, poor job attendance.
Q	Arias, T.	18	Senior	Dental Office; Secretary Trainee	None	See Note 3.
R	Perez, T.	17	Junior	Personnel Office, DMAFB.	None	See Note 4.

Notes:
1. DMAFB: Davis-Monthan Air Force Base.
2. Enrolled on three occasions; no credit earned.
3. To be employed upon graduation.
4. Start employment June 12.

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EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Bedoy, Geraldo
2. Date of Birth: June 10, 1954
3. Area(s) of Career Interest: Auto mechanics
4. Previous Work Experience: Helper in auto body shop; gas station attendant; and restaurant worker ("El Taco"). Worked one summer with Neighborhood Youth Corps; assigned to Tucson City Refuse Department as Trash Collector.
5. Academic Background:
   a. Graduating Senior
   b. Vocational Courses: General Metals Shop; Auto Mechanics; and Wood Shop.
   c. Cumulative Grade Average: 2.7436
   d. Linear Class Standing: 366/604
6. Job Training Station Data:
   a. Station: Non-Destructive Test Facility, Military Aircraft Storage and Disposition Center, Davis-Monthan Air Force Base.
   b. Training: Assists in physical inspection of aircraft parts for conformance with technical description and change data. Uses revised drawings and specification sheets to identify model, series, and Modification Work Order changes. Up-dates shop records, parts tags, and catalogs as directed by supervisor.
   c. Attitude: Excellent. Supervisor has consistently reported that student is eager to learn, is a hard worker, and is readily accepted by normal work force.
   d. Skills: Has gained skills in use of parts records systems and use of drawings and technical data used in large scale logistical system.

e. Knowledge: Has developed knowledge of aircraft parts and use of maintenance manuals and related technical data.

7. Post Secondary Plans: Job training station led to development of student's interest in aircraft mechanic's training. Student applied for the Aircraft Frame and Power Plant Mechanic's Course at Cochise College, Douglas, Arizona. He was accepted and subsequently granted tuition assistance in the form of a National Defense Student Loan, a matching grant, and student employment benefits in the amount of $2,049. This amount will cover cost of one year's training leading to a FAA mechanic's certificate.

8. Comments: Student experienced few problems during high school career. Grades, attendance record, and conduct records are above average. Student had no post secondary plans to continue training or education because of family's severe economic problem. He was given assistance in investigating several possible opportunities for additional training. As noted above, he subsequently developed an interest in aircraft mechanics and will undertake post secondary training in this field. Student's career outlook and maturity have shown significant development during the time in which he has worked with this Program. Supervisor's appraisal and student's comments regarding his training are attached as inclosures to this report.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: BEDOY, GERALDO ("JERRY")

WORKSITE: _____ DATE: _____

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness 2
   Days absent without leave 1 went to see about Cochise College

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name Dorrie V Baker Student's Name Harold L Bailey

Extension _____

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Benitez, Dolores
2. Date of Birth: July 23, 1954
3. Area(s) of Career Interest: Office work-undefined; and Commercial Art.
4. Previous Work Experience: Part time work as baby sitter.
5. Academic Background:
   a. Class: Junior
   b. Vocational Courses: Typing
   c. Cumulative Grade Average: 3.1852
   d. Class Standing: Not applicable
6. Job Training Station Data:
   a. Station:
      (1) Base Recreation Center, Davis-Monthan Air Force Base.
      (2) Disaster Control Center, DMAFB.
   b. Training:
      (1) Under supervision of Recreation Center Director, prepared various illustrations for use in displays and on local bulleting boards. Performed minor and routine office tasks as directed. A semi-professional artist was subsequently assigned to the Recreation Center with the result that Benitez became surplus to the needs of the Director. Limited office skills and marginal performance of assigned tasks necessitated student's transfer to another job station.
      (2) Disaster Control Center: On this job station, student has been able to utilize artistic talents in preparation of drawings and sketches for use in training materials, posters,

announcements, and other publications issued by the Disaster Control Center. Further performs routine office tasks such as limited typing, filing, and telephone reception work.

c. Attitude: Satisfactory. Student appears to be shy, immature, and lacking in initiative or incentive. Job attendance is marginal.

d. Skills: Student has an artistic ability in preparing free hand sketches and drawings. She has employed her abilities in her present training position and has shown steady improvement in performing free hand work. She is hampered by a lack of office skills and lack of initiative in developing these or other skills that could help her in employment situations.

e. Knowledge: Student has developed knowledge of routine office work and has developed better understanding of the skill requirements necessary for successful job performance.

7. Post Secondary Plans: Student has developed an interest in Health Career field and has shown particular interest in practical nursing or the medical technician field. She has been encouraged to investigate the possibilities in this field and has been urged to seek further information in Health Career training.

8. Comments: Student's lack of maturity has been a significant problem area during this period. Miss Varela has worked closely with both the student and her mother to provide assistance in over-coming this problem. Student's response to Miss Varela's efforts and to job experience has been satisfactory. The student's response to job supervision has shown significant improvement in the sense that she now accepts her supervisor's guidance as being helpful rather than critical.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: BENETIZ, DOLORES

WORKSITE: _____ DATE: _____

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments: Days absent due to sickness _____
   Days absent without leave 0

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory (✓) Poor ( )

7. Would you hire this individual again if you had the opportunity: YES

If not, please explain.

8. Suggestions for Improvement SUGGEST THAT SHE SHOW DETERMINATION TO COMPLETE WORK AND IMPROVE SKILL, PATICULARLY THOS WHICH ARE NOT OF PRIMARY INTREST TO HER BUT ARE A PART OF THE TOTAL REQUIREMENT OF A JOB OR CARER. SHOULD NOT BE EASILY DISCORAGED.

Supervisor's Name Verna D. Bowman Student's Name _____

Extension 793-3251

I ALSO WISH TO SAY THAT HER ARTISTIC WORK HAS SHOWN CONTINUED PROGRESS. TYPING MAY IMPROVE FASTER IF WE GIVE HER MORE TO DO. SHE HAS SHOWN INTRES, ADTITUDE AND INTELLIGENCE IN ASSIGNMENT OF ~~[illegible]~~ 2ND FILING AIR FORCE REGULATIONS.

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Canett, Mary Helen (Mrs)
2. Date of Birth: June 6, 1952
3. Area(s) of Career Interest: General office work or dental technician.
4. Previous Work Experience: Sales clerk.
5. Academic Background:
   a. Graduating Senior
   b. Vocational Courses: Typing; General Business; and Office Machines.
   c. Cumulative Grade Average: 3.0286
   d. Linear Class Standing: 436/604
6. Job Training Station Data:
   a. Station: Dental office specializing in orthodontics.
   b. Training: Receives training in preparation of dental castings used in the development and fitting of orthodontic devices. Works with patients as dentist's assistant. Performs routine office tasks during absence of office secretary.
   c. Attitude: Excellent. Doctor comments that student is dependable, learns quickly, and has a cheerful and friendly disposition. Student is particularly effective in working with children.
   d. Skills: Student is gaining technical skills in dental practices and is acquiring additional skills in office practices.
   e. Knowledge: Student's knowledge and practice in office skills has been helpful and is useful in this position. However, the main knowledge gained in this training position addresses dental practices and associated techniques and experience in working in

a professional atmosphere.

7. Post Secondary Plans: Student is married and has a small child. Her primary interest was to gain experience and salable skill prior to graduation in order to assist in supporting her family. Her training progress has been excellent and she has been accepted for full time employment in this position upon graduation.

8. Comments: This student is far more mature than the average high school student and had a very definite goal in mind at the time she entered the program. She is well groomed, always presents an attractive appearance, and has an open and friendly personality. These attributes, along with her willingness to learn and good job habits, were significant considerations in selection for full time employment. Supervisor's appraisal is attached as an inclosure.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 26 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: Canett, Mary Helen

WORKSITE: Dental Office, Dr. Schmitz DATE: _____

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness _____
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

Donald Schmitz, DDS MS

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Needs improvement in English & I believe she will work on it.

Supervisor's Name_____ Student's Name_____

Extension_____

RETURN TO_____AS SOON AS POSSIBLE

2

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Garcia, Juanita
2. Date of Birth: April 13, 1953
3. Area(s) of Career Interest: Office or secretarial work.
4. Previous Work Experience: Neighborhood Youth Corps-Safford Area Council. Routine office work to include typing, filing, and telephone receptionist.
5. Academic Background:
   a. Graduating Senior.
   b. Vocational Courses: Typing (2 years); Office Machines; and Clerical Practice.
   c. Cumulative Grade Average: 3.1200
   d. Linear Class Standing:
6. Job Training Station Data:
   a. Station: Dean's office, Tucson High School.
   b. Training: Assists office secretary in performance of routine office tasks to include typing (completes various school forms pertaining to student administration and prepares standard letters using school correspondence format). Acts as receptionist at office counter and for incoming office telephone calls.
   c. Attitude: Excellent. Supervisor consistently reports that student is eager to learn, follows instructions, and is an industrious worker.
   d. Skills: Student's office work skills have shown steady improvement during this training period. Her typing skill has improved in speed, accuracy, and neatness.

e. Knowledge: Student's knowledge of general office procedures has shown steady improvement.

7. Post Secondary Plans: Student intends to enroll in secretarial training courses at Pima College upon graduation. She has applied for summer employment at Davis-Monthan Air Force Base through the Bureau of Indian Affairs.

8. Comments: One of the more mature students active in the Program. Her training period in the Dean's Office, although relatively short, has given her the opportunity to refine existing skills and to gain additional experience in working with the public. Student encouraged to apply for entry level job position with U.S. Civil Service Commission and received an applicant rating of 96. Student has been further encouraged to apply for tuition and work assistance programs available to minority groups at Pima College.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: GARCIA, JUANITA

WORKSITE: Dean's Office, Tucson High School DATE: 5/22/72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Days absent due to sickness 3
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (X) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: YES

If not, please explain.

8. Suggestions for Improvement

Continued diligent effort toward accuracy in her work and as she is naturally shy, making definite efforts to put herself forward in personal contacts and in her assisting people both in the office and on the telephone.

Supervisor's Name Serafina N. Gross Student's Name _____

Extension _____ Supervising Secretary Caroline Strong

RETURN TO _____ AS SOON AS POSSIBLE

2

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Guzman, Maria
2. Date of Birth: October 3, 1952
3. Area(s) of Career Interest: Secretarial or office work.
4. Previous Work Experience: Neighborhood Youth Corps program; Office aide, Tucson City Refuse Department. Also, under NYC, worked as clerk-typist in the Tucson Public School system.
5. Academic Background:
   a. Graduating Senior
   b. Vocational Courses: Typing; Office Machines; and General Business courses.
   c. Cumulative Grade Average: 2.2424
   d. Linear Class Standing: 181/604
6. Job Training Station Data (Two stations involved):
   a. Stations:
      (1) Office Aide, dental clinic. Performed routine office tasks under supervision of office secretary. Student is quite shy and very soft spoken. She experienced extreme difficulty in meeting incoming office patients and in handling income telephone calls. Employer suggested transfer to job with less public contact requirements.
      (2) Office aide and inventory clerk trainee, auto parts store. Assists office secretary with routine taks and, under the supervision of the store manager, is being trained to post and maintain store's daily inventory records.
   b. Training: Student has received practical experience in

office work to include preparation of correspondence, filing, billing, and records maintenance. Her supervisor at the dental office stated that her work was excellent, with the exception of public contacts, and provided an excellent reference for future employment. Her current position with the auto parts store provides on the job training in daily management of a large and complex parts inventory system.

c. Attitude: Excellent. Supervisors have commented that student is industrious, follows instructions, and learns rapidly. Although she is quite shy, she is very determined and has made exceptional progress in her second job training situation.

d. Skills: Student has acquired skills and proficiency in routine office work and is rapidly gaining further skills in inventory procedures and management.

e. Knowledge: Second supervisor (auto parts store) has commented on student's knowledge of office routine and her business like attitude. Store manager states that, with additional experience, student will be capable of handling all inventory maintenance tasks by herself.

7. Post Secondary Plans: Student has been accepted by present employer for full time office position upon graduation from high school.

8. Comments: During initial interview with this office it was discovered that student was an alien (born in Mexico). She was encouraged to apply for U.S. citizenship and has done so. Student's progress, particularly development of poise and self confidence, has been excellent. She appears to be making a significant effort to overcome her shyness. Current supervisor has made several favorable comments on student's attention to detail, accuracy, neatness, and

work habits. Supervisor's appraisal and student's comments on Program are attached as inclosures.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: GUZMAN, MARIA

WORKSITE: Go Auto Parts & Supplies
3535 S. Palo Verde, Tucson, Arizona 85713 DATE: 5/24/72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Days absent due to sickness _____
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent ( ) Satisfactory (X) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name R. Delia Munoz Student's Name Maria Guzman

Extension

COMENT:

Maria has been a great help in our office. She is a quite person and follows instructions as given and shown initiative in certain areas. We hope she continues her education as we feel that she is the youth needed by our country for the tomorrows to come.

Pending arrangements by some of our staff I hope Maria will be able to continue working with us this summer.

note: On a subsequent discussion, Mrs. Munoz stated that she feels a "Satisfactory" rating, or "Unsatisfactory" have more meaning than "Excellent" or "Poor"

RETURN TO AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Mendoza, Jimmy
2. Date of Birth: July 17, 1953
3. Area(s) of Career Interest: Air Conditioning/Refrigeration
4. Previous Work Experience: Service Station attendant and carpenter's helper.
5. Academic Background:
   a. Graduating Senior
   b. Vocational Courses: General Metals Shop; Machine Shop; and Air Conditioning/Refrigeration (2 years).
   c. Cumulative Grade Average: 2.3125
   d. Linear Class Standing: 191/604
6. Job Training Station Data:
   a. Station: Air Conditioning and Refrigeration Shop, Base Engineer's Office, Davis-Monthan Air Force Base.
   b. Training: Assists journeyman refrigeration mechanics in testing, trouble diagnosis, repair, and installation of all types of refrigeration equipment. Assists in depot level (re-build) maintenance of refrigeration equipment ranging from heavy duty industrial units to household equipment.
   c. Attitude: Supervisor reports that student is attentive, eager to learn, and willing to work. Shop personnel contacted have commented on student's knowledge of refrigeration theory and mechanics.
   d. Skills: Student has gained skills in shop procedures, applied test routines, and maintenance procedures used in a wide variety of refrigeration equipment.

e. Knowledge: Student has gained working knowledge of heavy duty industrial and specialized (missile site equipment) refrigeration equipment. Practical experience included hands-on training in re-building of major units, on-site trouble call procedures, and maintenance of equipment records.

7. Post Secondary Plans: Initially, student was interested in obtaining practical experience in his area of career interest. He subsequently elected to obtain further training in the air conditioning and refrigeration field, and submitted an application for a scholarship to a local trade school. He has not received a reply to his application at this time. Student is considering entering Pima College if the trade school scholarship application is not favorably considered.

8. Comments: Student is very reserved and in-drawn; appears to be a "loner". His grade average, attendance record, and conduct are well above average. Records indicate that he is punctual in reporting for classes with few "tardy's" noted. His job training station supervisor comments that he is careful in following instructions and that he has demonstrated iniative in several ways. As an example, the student frequently performs shop clean up work, without being asked to do so, while waiting for transportation. Journeyman mechanics state that the student has the interest and potential to succeed in this particular field. Supervisor's appraisal and student's comments on the Program are attached as inclosures.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: Mendoza. Jimmy

WORKSITE: Refrigeration Shop DATE: 16 MAY 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness 0
   Days absent without leave 0

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name Russell C Dunn Student's Name _____

Extension 3302

RETURN TO _____ AS SOON AS POSSIBLE

2

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Monje, Rose
2. Date of Birth: March 4, 1954
3. Area(s) of Career Interest: Legal secretary or general office work as salable skill. Interest in fashion modeling.
4. Previous Work Experience: Neighborhood Youth Corps Program-child care in nursery; worked in book binding plant; general office work in Sanitation Department, City of Tucson.
5. Academic Background:
   a. Class: Sophomore; has attended school for three years but has not earned sufficient credits for junior standing.
   b. Vocational Courses: Typing, General Business, and Bookkeeping. (Exposure only; has failed most of these courses.
   c. Cumulative Grade Average: 3.750
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Social Actions Office, Headquarters, Davis-Monthan Air Force Base.
   b. Training: Receptionist and general office work. Receives office visitors and incoming telephone calls. Files office correspondence and performs limited typing assignments.
   c. Attitude: Marginal. Very poor job attendance record; supervisor is considering discharge for cause because of poor attendance. See further discussion in paragraph 8, this report.
   d. Skills: Limited. Student has had the opportunity to gain general office skills. However, her erratic attendance pattern has precluded assignment of work areas that involve a requirement for continuity.

e. Knowledge: Limited. Student has had the opportunity to gain both knowledge and practical experience in general office work, but has been unable to make any significant progress up to this point in time.

7. Post Secondary Plans: None determined at this time.

8. Comments: Student has experienced severe family situation that contributes in large measure to her several problem areas. Upon reaching 18 she moved from her home to that of a friend. This arrangement lasted for several weeks and was abruptly terminated after an arguement erupted within the family with whom she was residing. Student then moved into a motel apartment with her brother, who is unemployed. Review of student's school records indicates a long term problem in attendance and record of academic failures because of poor attendance. This pattern carried over in to her job training situation. Numerous conference with this student have been essentially non-productive. Home visits by Miss Varela appear to have had an encouraging effect upon the student, but not enough to alter her habit patterns. In addition to personal problems, the student has experienced a health problem. She was taken to the El Rio Neighborhood Health Center by her mother for examination. A Health Center team consisting of a doctor, Practicing Nurse, and social worker was subsequently assigned to assist this student. Several actions have been initiated by this team on behalf of this student. However, it is too early to identify or determine the results of such assistance.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: MONJE, ROSE

WORKSITE: Social Actions Office D-M AFB DATE: 17 May 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory ( ) Poor (✓)

   Comments: Days absent due to sickness _____
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory ( ) Poor ( )

   Comments: The nature of this office presents an organized approach to providing work for this student. She is enthusiastic about the job but has not shown motivation towards learning work skills.

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent ( ) Satisfactory ( ) Poor ( )

The uniqueness of our office has inhibited our ability to provide training on a regular basis. It's felt in some ways this has interrupted the students opportunity to improve. We do recognize the need for improvement, but feel we can overcome this with additional time spent with her.

1224

7. Would you hire this individual again if you had the opportunity:_____

If not, please explain.

8. Suggestions for Improvement Rose needs to show more motivation towards improving her abilities to type and communicate in writing.

Supervisor's Name Bud D. McGowan Student's Name Rose Monje

Extension 4228

RETURN TO_____AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

1226

End of Semester Report

1. Name: Mora, Norma
2. Date of Birth: December 26, 1954
3. Area(s) of Career Interest: Social worker; interested in working with children.
4. Previous Work Experience: Neighborhood Youth Corps Program-worked as clerk-typist at U.S. Air Force Recruiting Station.
5. Academic Background:
   a. Class: Junior
   b. Vocational Courses: Typing and office machines.
   c. Cumulative Grade Average: 3.520
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Civilian Payroll Section, Office of the Comptroller, Davis-Monthan Air Force Base.
   b. Performs office tasks associated with computation, preparation, and audit of documents utilized in preparation of pay rolls. Receives training in operation of various office machines to include adding machines, key punches, etc. Checks and verifies data recorded on various types of machine run-offs. Performs other routine office tasks as directed.
   c. Attitude: Satisfactory. Student is somewhat shy and is immature. Supervisor comments on seemingly sullen attitude when student is assigned routine or repetative tasks.
   d. Skills: Student has opportunity to acquire skills associated with the several activities required in computation, recording, and preparation of pay rolls. Student has stated that, "there is nothing to learn in this job". Supervisor is aware of this

attitude and has made an effort to provide varied experiences within the operating section.

d. Knowledge: Student has an opportunity to gain knowledge of large scale office operations, additional office skills, and basic functions of a financially oriented office.

7. Post Secondary Plans: Student is undecided as to any future plans at this time.

8. Comments: Student has shown steady, if slow, improvement of attitude during exposure afforded by this job training station. Her limited skills precludes assignment to many of the job areas available in this particular office. Student's job attendance record has shown steady improvement. These trends suggest a certain amount of maturity has developed as a result of job training experience. Student has recently stated that she has asked her supervisor more varied assignments in office tasks. Conferences with supervisor indicates student's requests will be favorably considered within the needs of the office routine.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: MORA, NORMA

WORKSITE: Civilian Payroll, Davis-Monthan AFB DATE: 26 May 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Days absent due to sickness 5 (approx)
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Improving

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Improving

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Improving

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments: Improving

6. Rate of Improvement

   Excellent ( ) Satisfactory (X) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name Sara L A Weiss Student's Name Norma Mora

Extension 293-3256

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Pro, Angelita
2. Date of Birth: July 15, 1954
3. Area(s) of Career Interest: Library Science; Telephone Operator; general office work.
4. Previous Work Experience: Assistant Librarian, Tucson High School Library.
5. Academic Background:
   a. Class: Junior
   b. Vocational Courses: Typing, General Business, and Clerical Practice.
   C. Cumulative Grade Average: 2.888
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Technical Order Library, Military Aircraft Storage and Disposition Center, Davis-Monthan Air Force Base.
   b. Training: Receives training in administration and operation of large technical library. Prepares index cards on new incoming documents or technical manuals pertaining to aircraft and related materials; posts changes to technical documents and records such changes in central card files. Records issue of library materials to using personnel; receives returned materials and annotates appropriate log records. Performs routine administrative tasks as directed.
   c. Attitude: Excellent. Supervisor has consistently commented on student's willingness to learn, high level of aptitude for this type of work, and ability to work in cooperation with a diverse group. Student has an excellent job attendance record Normal

work force has commented on student's attention to detail, ability to follow instructions, and good work habits.

d. Skills: Student has gained additional skills in library practices, office practices, and administrative procedures.

e. Knowledge: Exposure on this job training station has afforded student the opportunity to gain knowledge of a specialized library operation.

7. Post Secondary Plans: Undecided at this time. Student has expressed interest in obtaining formal training (college) in Library Science or secretarial training at Pima College.

8. Comments: This is a very able and promising student. She is quite mature for her age, has a pleasant personality, and makes good use of her capabilities. Her attitudes towards school and job training, along with her interest in further training, are suggestive of successful performance in any field that she may eventuaally decide to pursue.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: ANGELITA PRO

WORKSITE: MASDC MAQA TO LIBRARY UNIT=7312 DATE: 15 MAY 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness —
   Days absent without leave —

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments: See reverse side

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (X) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name William E Vaughn Student's Name Angelita Pro

Extension

Miss Pro has learned the many complex tasks associated with a DOD library. Duties involved, receipt, distribution (24 accounts) filing (a very difficult task in alpha-numeric procedures) making up accountable record cards and typing requisitions. She learned very quickly, is a very industrious student/employee and her job performance has been excellent. Angie is the type of person we would be pleased to recommend for continuation in the program.

RETURN TO AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

1234

End of Semester Report

1. Name: Redmond, Rose
2. Date of Birth:
3. Area(s) of Career Interest: Receptionist; clerical and filing work; or Nurse's Aide.
4. Previous Work Experience: Neighborhood Youth Corps Program-worked as receptionist and out-patient records clerk, Pima County Hospital.
5. Academic Background:
   a. Class: Sophomore; insufficient credits for Junior standing.
   b. Vocational Courses: Typing (one semester).
   c. Cumulative Grade Average:
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Transportation Office, Davis-Monthan Air Force Base.
   b. Training: Receives training in administrative processing of transportation documents. Identifies and sorts bills of lading according to category; transfers data from shipping documents to office log forms. Performs filing tasks and other routine duties as assigned.
   c. Attitude: Marginal. Student has a poor job attendance record. Supervisor has given a final warning and will discharge this student for cause if her attendance does not improve. Student's attitude can probably be best characterized as disinterested or lackadaisical. Numerous conferences with the student on this problem area have not been productive.
   d. Skills: Limited. Student has only limited office skills and has failed to improve [illegible]sting skill level or to develop any

new skills. Her exposure to operation and administration of transportation activities has provided with a basic understanding of the skills and aptitudes required for this type business.

e. Knowledge: Limited. Student has gained a limited knowledge of office routine.

7. Post Secondary Plans: None at this time. Student has been unable to decide what she can or wants to do. Her main interest appears to be a type job that will permit her to socialize.

8. Comments: Student's attitide and immaturity are significant problem areas. She is prone to regard guidance or correction on the part of her supervisor as being discriminatory. Her limited skills have precluded job transfer. There is a decided lack of motivation or incentive, at least at this point in time. Student will be allowed to continue at her present job, providing her supervisor does not discharge her for cause, in an effort to provide her with some income and to provide as much opportunity as possible for development of a more positive attitude.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May '72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: REDMOND, ROSE

WORKSITE: Traffic Management Office (Freight Section) DATE: 24 May 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory ( ) Poor (X)

   Comments: Days absent due to sickness _____?
   Days absent without leave _____?
   Average about 2 days off per week, unexplained.

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent ( ) Satisfactory (X) Poor ( )

7. Would you hire this individual again if you had the opportunity: No ?

If not, please explain. Miss Richmond has a very bad habit of not reporting for work on a daily basis, also fails to notify her section that she will be off. One time she was off two full weeks and didn't notify anyone.

8. Suggestions for Improvement

Improve her attendance.

Supervisor's Name Alec O. Richmond Student's Name _____

Extension 793 - 3557

RETURN TO _____ AS SOON AS POSSIBLE

1237

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Russell, Margret Ann
2. Date of Birth: October 9, 1954
3. Area(s) of Career Interest: Juvenile Probationary Officer; or Legal Office Secrectary.
4. Previous Work Experience: Food wrapper and cashier, drive-in restaurant.
5. Academic Background:
   a. Class: Junior
   b. Vocational Courses: Typing.
   c. Cumulative Grade Average: 3.500
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Administrative Section, Staff Judge Advocate's Office, Davis-Monthan Air Force Base.
   b. Training: Office Receptionist. Receives incoming visitors and directs them to action agent within the SJA's office. Assists in initial processing of various legal documents for subsequent completion of appropriate legal officer. Receives incoming telephone calls and provides caller with required office information. Performs other routine office tasks such as typing and filing.
   c. Attitude: Satisfactory. Supervisor comments on student's informal dress, manners, and conduct in office environment. Student has had difficulty in getting along with her teachers. Teachers, in turn, complain of student's flippant attitude characterized by inattention, repeated absences or "tardies", and failure to do class work.

d. Skills: Student has gained skills in office practices common to the legal professions. Although her attitude has been a problem, she is industrious and takes her job training seriously. Supervisor has stated his intention of advancing student to more demanding work in the SJA's legal library.

e. Knowledge: Student has developed knowledge of legal related office work, an appreciation of the background and training required for this type of work, and a better understanding of human relations on the job and in the school environment.

7. Post Secondary Plans: Not fully determined at this time. Student has stated that she is interested in attending four year college upon graduation from high school. Her general areas of interest are oriented towards social work.

8. Comments: Student's mos significant problem areas are immaturity and attitude, one growing from the other. She has made excellent progress, in most respects, on her job training station with a positive change of attitude noted in her relationship with supervisor to the extent that she will now accept guidance without terming it discrimination. Numerous conferences concerning her attitude towards teachers have produced minor changes. Discussion with student's supervisor suggests that advancement to a more demanding job may produce positive results in attitude change.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number_____

NAME OF STUDENT AID: RUSSELL, MARGRET

WORKSITE: Base Legal Office, DMAFB, Az DATE: 15 May 72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness 2
   Days absent without leave 0

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Margaret has shown steady improvement since coming to work here.

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Additional training in office department will aid Margaret a great deal. I wish we had the time to help her more than we have.

Supervisor's Name Wiley J. Martin Student's Name Margaret Fewell

Extension 793-5243

Margaret has the ability to learn and with additional assistance and training she is capable of being more than a receptionist

Wiley J. Martin
SMSgt USAF

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

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End of Semester Report

1. Name: Urbina, Frank
2. Date of Birth: October 15, 1953
3. Area(s) of Career Interest: Auto or aircraft mechanics.
4. Previous Work Experience: Clerk and general laborer, Lucky Stores.
5. Academic Background:
   a. Senior; graduating status to be determined.
   b. Vocational Courses: Automotive Shop; General Metals; and Wood Shop.
   c. Cumulative Grade Average: 4.129
   d. Linear Class Standing: Not currently included in graduating senior class.
6. Job Training Station Data:
   a. Station: Non-Destructive Test Facility, Military Aircraft Storage and Disposition Center, Davis-Monthan Air Force Base.
   b. Training: Assists in physical inspection of aircraft parts using chemical, sonic, and ultra-violet light techniques to locate cracks, strain areas, or otherwise hidden faults in aircraft parts. Cleans, lubricates, and packages inspected parts for subsequent shipment in logistical system.
   c. Attitude: Excellent. Supervisor has consistently reported that student is exceptional in terms of his willingness to learn, accuracy, and mechanical abilities. Student was readily accepted by normal work force and is held in high regard by the several journeyman inspectors for who he has worked. Conversely, student's attitude towards the school environment is almost completely negative as indicated by an

extremely poor attendance record and low academic achievement.

d. Skills: Student has gained a significant skill level in non-destructive test techniques. Supervisor states that he is capable of satisfactory performance in most of the skills required in this job area.

e. Knowledge: Student has acquired sufficient knowledge to qualify him for an entry level position in the non-destructive test job area. Supervisor has provided on the job training and instruction that is intended to prepare the student to take the entry level certification test required of workers in this area.

7. Post-Secondary Plans: Student is tentatively planning to enroll in summer school session in order to earn sufficient credit for graduation. He developed a deeper interest in aircraft mechanics as a result of exposure in this job training station and subsequently applied for admittance to the Aircraft Frame and Power Plant Mechanic's Course at Cochise College, Douglas, Arizona. He has been accepted for this training, but there is some doubt at this time as to whether or not he will actually enroll. Student plans to marry in July with the possibility that this responsibility will preclude further training.

8. Comments: One of the most positive aspects of this student's participation in this Program was the fact that he did remain in the school environment during the past semester. He had planned to drop out of school at the end of the Fall Semester but remained after assignment to a job training station that caught his interest. This student's high school record indicates four years of attendance problems, poor academic achievement, along with other problem areas.

His main interest is in mechanics and he has been encouraged to follow this career area. His job attitude, work attendance record, and successful job performance suggest that the student will be able to do entry level employment in either a mechanical or non-destructive test work area.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number _____

NAME OF STUDENT AID: URBINA, FRANK

WORKSITE: _____ DATE: _____

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness 0
   Days absent without leave 0 Paperwork Checker Collaborator

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

7. Would you hire this individual again if you had the opportunity: Yes

If not, please explain.

8. Suggestions for Improvement

Supervisor's Name [illegible] Student's Name [illegible]

Extension _____

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Valencia, Carmen Odelia
2. Date of Birth: January 25, 1954.
3. Area(s) of Career Interest: Probation Officer; Social worker.
4. Previous Work Experience: Dean of Students Office, Tucson High School. Performed general office work to include typing, filing, desk and telephone reception work.
5. Academic Background:
   a. Graduating Senior.
   b. Vocational Courses: Typing, Shorthand, Business Machines, and Clerical Practice.
   c. Cumulative Grade Average: 2.3421
   d. Linear Class Standing: 205/604
6. Job Training Station Data:
   a. Stations:
      (1) Office and technical assistant, dental office.
      (2) Office assistant, Certified Public Accountant firm.
   b. Training:
      (1) Dental Office: Received training in professional office routine and technical training with dentist specializing in orthodontic practice. Office work included typing, billing, completion of appointments by telephone, and office filing. Technical training included preparation of dental castings, final processing of castings, and chair side experience in working with dental patients.
      (2) CPA Firm: Receives training in business and office practices in large (25 employees) accounting firm. Performs account filing, reproduction work (Xerox), typing and receptionist

c. Attitude: Excellent. Supervisors of both training have favorably commented on student's good job attendance, ability to follow instructions, and cooperative spirit. It should be noted that the job transfer was brought about by the fact that the dentist desired a full time employee and asked this student to remain in his office after graduation. The student's college plans conflicted with this arrangement and she was subsequently relocated in a position that would offer part time employment after enrollment in the University of Arizona.

d. Skills: Student has had an opportunity to gain practical skills in office work in both position in addition to the limited dental technician's training she received in working with Dr. Schmitz.

e. Knowledge: Current job provides student with knowledge of business practices, along with organization and operation of a large business office.

7. Post Secondary Plans: Student has received a tuition assistance award of $800 for her first year of work at the University of Arizona. She plans to enroll in the College of Business and Public Administration and pursue studies related to interest in probationary work. The office supervisor in charge of her current training station has stated that the firm will retain the student on a part time basis in order to assist her college education plans.

8. Comments: Job training stations held by this student have not been in her area of career interest, but have served to provide her experience and salable skills that will allow her to support college plans. This student is very capable individual with definite plans and long range goals in mind. Her school records and job training performance suggest the capability to succeed in her area of career

To be returned to _____
no later than_____

SUPERVISOR'S APPRAISAL

Number 1

NAME OF STUDENT AID: Valencia, Carmen

WORKSITE: Peat, Marwick, Mitchell, and Company DATE: 5/31/72

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments: Days absent due to sickness _____
   Days absent without leave _____

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (X) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (X) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent ( ) Satisfactory ( ) Poor ( ) N/A.

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Valencia, Rachel
2. Date of Birth: June 13, 1955
3. Area(s) of Career Interest: Long range interest in teaching career. Short range interest in office skills.
4. Previous Work Experience: Neighborhood Youth Corp Program- worked as recreation assistant at Richey School.
5. Academic Background:
   a. Class: Sophomore.
   b. Vocational Courses: none.
   c. Cumulative Grade Average:
   d. Linear Class Standing: Not applicable.
6. Job Training Station Data:
   a. Station: Teacher's Aide, Roosevelt Elementary School.
   b. Training: Assists teacher (Mrs. Elizabeth Bentley) in working with third grade students. Assists small groups in working on art projects; provides reading assistance to individual students as directed; monitors play ground activities; and performs other classroom tasks under teacher's supervision.
   c. Attitude: Excellent. Principal of Roosevelt School, Mr. Geesy, and Mrs. Bentley have commented on student's rapid development during the period she has been in this job training station. Student experienced initial problem in too close an identification with the children under her care. However, after guidance and counseling by her supervisor and this office, she made significant improvements. Student's level of improvement noted in the fact that both Mr. Geesy and Mrs. Bentley have requested the student's re-assignment to the same job position next year, if possible.

d. Skills: Student has gained skills in working with young children. She demonstrates artistic abilities and has gained skills in providing assistance to small groups working on arts or crafts projects.

e. Knowledge: Student has gained knowledge of teaching profession and the teacher's role in the classroom.

7. Post Secondary Plans: Student is undecided at this time. Her exposure to the classroom environment has modified her interest in the teaching profession. She retains an interest in working with children; however, her interest appears to be swinging from academic work to the arts and crafts area.

8. Comments: A number of changes have been noted in this student's attitudes since she entered the Program. She has become more articulate and appears to regard herself in a different light. With Mrs. Bentley's assistance, a summer job with the Arizona Historical Society Museum was established for this student. The Museum's Director, Mr. Sid Brinckerhoff, has agreed to provide a position that will allow the student to work with various summer program groups. This position will include a wide variety of work experiences that should further assist the student in more clearly identifying her interest and capabilities.

MODEL CITIES EXEMPLARY
VOCATIONAL EDUCATION PROGRAM

To be returned to _____
no later than 24 May 72

SUPERVISOR'S APPRAISAL

Number _____

NAME OF STUDENT AID: VALENICA, RACHEL

WORKSITE: Roosevelt Elementary School DATE: 5/16

Please complete this appraisal form for the above named student aid. This information will be confidential and will be used in assisting the worker toward self-improvement. Please be critical. Please go over this form with your student aid.

1. Attendance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments: Days absent due to sickness 4
   Days absent without leave 0

2. Attitude Toward Work (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

3. Attitude Toward Others (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

4. Job Performance (If you rate a Student Aid as poor, please explain.)

   Excellent ( ) Satisfactory (✓) Poor ( )

   Comments:

5. Personal Appearance (If you rate a Student Aid as poor, please explain.)

   Excellent (✓) Satisfactory ( ) Poor ( )

   Comments:

6. Rate of Improvement

   Excellent (✓) Satisfactory ( ) Poor ( )

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7. Would you hire this individual again if you had the opportunity: definitely

If not, please explain.

8. Suggestions for Improvement More work with small numbers of people where she is given responsibility and the power to make her own decisions.

Supervisor's Name Elizabeth Bentley Student's Name Rachel Valencia

Extension 6838

RETURN TO _____ AS SOON AS POSSIBLE

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE

End of Semester Report

1. Name: Yribe, Albert
2. Date of Birth: February 7, 1955
3. Area(s) of Career Interest: Undetermined.
4. Previous Work Experience: Neighborhood Youth Corps Program-worked in Tucson Public Library; four months training with Job Corps; dish-washer and bus-boy.
5. Academic Background: None. This student has started school on three occasions but has never remained in class for a full semester. He has no high school credits at this time.
6. Job Training Station Data:
   a. Station: Commissary Warehouse, Davis-Monthan Air Force Base.
   b. Training: Worked in receipt, storage, and issue of foodstuff items intended for use in Base Commissary and field ration mess facilities. Assisted in inventory work, case lot counts of materials, and completion and check of out-bound shipments.
   c. Attitude: Poor. Student has poor job and class attendance records. No apparent motivation towards job training. Supervisor requested relief of student for poor job attendance.
   d. Skills: Limited. Student demonstrated some interest in inventory work but could not perform satisfactorily because of poor arithmetic skills.
   e. Knowledge: Limited. Student is generally unprepared for unskilled and certainly semi-skilled, training position. In effect, this individual is probably a functional illiterate and his past record suggests small hope for any improvement.

8. Comments: This student was accepted by the Program from the Youth Service Bureau's input of drop-outs. He was enrolled in classes at the beginning of the Spring Semester, but quickly repeated his previous absence pattern. Efforts by other students (Bedoy and Urbina) to encourage Albert to get to class were as unsuccessful as those efforts made by the several agencies and individuals who have attempted to work with this individual. Albert has not attended classes at all for the past three weeks and was subsequently dropped from his job training station and this Program.

Tab Q, Other Students Assisted

1. In addition to those students enrolled as participants in the Program, this office provided assistance to other students in locating and obtaining part time jobs. Several of these students have not been identified elsewhere within this report and are noted here for information purposes.
2. Student Assists:
   a. Morales, George: Assisted by Miss Varela in finding part time evening employment as a mechanics helper. Student worked for approximately six weeks and was subsequently discharged for cause.
   b. Bedoya, Arturo: Student was referred as replacement for Morales (par. a. above). He worked for approximately two months and was subsequently discharged for cause.
   c. Arias, T.: Student was placed as office secretary trainee in a Dental office, effective upon graduation.

Program Drops or Resignations

1. As noted in the body of this report, several students were dropped from the Program for cause or voluntarily resigned. These cases are summarized in this tab.

2. Voluntary Resignations:

   a. Hegwood, James: Student was interested in drafting and was assigned a job training station with an engineering drafting section at DMAFB. Student subsequently resigned to take a position that offered more working hours (dish washer).

   b. Smoke, Howard: Student replaced Hegwood, shown above. After making excellent progress for three months, student moved from foster home and elected to live with "hippie" group and dropped out of school. Numerous attempst were made on the part of this office and his case worker, Pima County Welfare Department, to encourange him to return to the school environment. After living with a commune for about two weeks, student had a change of mind and enlisted in the U.S. Navy. Subsequent information indicates that student has deserted this Service.

   c. Gomez, Mark: Student was assigned work station in a shop specializing in custom manufacture of picture and mirror frames. Supervisor reported satisfactory training progress and offered part time job to support further training plans (Pima College). Student resigned from training position to accept employment as service station attendant.

3. Discharges for Cause:

   a. German, David: Student assigned job training in a welding shop. Attitude problems and poor job attendance resulted in discharge for cause.

b. Acedo, Tommy: Student assigned job training position as Electrician's Helper, Pima County Physical Plant Department. Attitude problems and poor job attendance resulted in discharge for cause.

c. Morales and Bedoya: See TAB "Q".

APPENDIX F

High School Forms

STUDENT INFORMATION FORM
EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

1. NAME_____
(Last) (First) (Middle)

2. ADDRESS_____
(Number, street, city) (Zip Code)

3. TELEPHONE NUMBER_____

4. DATE OF BIRTH_____
(Date) (Month) (Year)

5. Are you presently attending classes at Tucson High School?

YES_____

NO_____

6. If you are not attending school, when did you drop out?

_____Why did you quit?_____

_____

7. Are you now a JUNIOR_____

SENIOR_____

Other_____

8. What type of High School courses did you or are you now taking?

General Courses _____

College entrance preparation _____

Vocational Courses _____

9. What are your career interests? (How do you intend to make your living?)

_____

_____

_____

10. You may have no specific career interest in mind at this time. If this is the case, what skills, trades, or job areas would you like to learn about?

_____

_____

_____

_____

11. What are your plans for the future?

Find a job_____

Learn a trade_____

Go to College_____

Other_____

12. What skill related courses, such as shop, typing, etc., have you taken?

_____

_____

_____

_____

13. What skill related courses would you like to take?

_____

_____

_____

_____

14. List any school sponsored activities, such as sports or clubs, in which you are, or have been, active.

_____

_____

_____

INITIAL INTERVIEW INFORMATION
EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

1. Name_____

2. Address:_____ Phone:_____

3. Age:_____ Date of Birth:_____

4. School Year:_____ Counselor:_____

5. AREA (S) OF CAREER INTEREST:_____

_____

_____

_____

6. WORK EXPERIENCE:_____

_____

_____

7. ACADEMIC BACKGROUND:_____

_____

_____

8. FAMILY:

   a. Father: _____

   b. Mother: _____

   c. Brothers/Sisters: _____

9. OTHER INFO:_____

_____

10. COMMENTS:_____

_____

_____

_____

PLACEMENT INFORMATION
EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

1. NAME: _____

2. ADDRESS: _____

3. TELEPHONE NUMBER: _____

4. WAS PLACED AT: _____

_____

_____

5. DATE STARTED: _____

6. WORK SCHEDULE: _____

7. TYPE OF WORK: _____

_____

_____

8. RELATION TO CAREER INTEREST(S): _____

_____

_____

_____

9. JOB SUPERVISOR:

   a. Name: _____

   b. Title: _____

   c. Telephone Number: _____

10. REMARKS: _____

_____

_____

_____

EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

JOB SITE VISIT REPORT

1. Name: _____

2. Date: _____

3. Job Site: _____

_____

4. Supervisor: _____

5. Job Summary: _____

_____

_____

_____

_____

6. Comments: _____

_____

_____

_____

_____

_____

_____

_____

7. Action: _____

_____

_____

_____

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PLACEMENT INFORMATION
EXEMPLARY VOCATIONAL EDUCATION PROGRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

DISCUSSION NOTES

NAME: _____

DATE: _____

DISCUSSION WITH: _____

_____

PURPOSE: _____

_____

SUMMARY: _____

_____

_____

_____

_____

_____

ACTION/RESULTS: _____

_____

_____

_____

_____

_____

CIVILIAN PERSONNEL OFFICE
HEADQUARTERS 803d COMBAT SUPPORT GROUP (SAC)
Davis-Monthan Air Force Base, Arizona 85707

STUDENT _ AID _ QUESTIONNAIRE

FOR: Name_____

Address_____

Tel. No._____

Davis-Monthan Air Force Base can be compared to a small community. There is performed on the base by someone just about everything that exists in the City of Tucson. As an example, we have our own fire department, police department, hospital, grocery store, water plant, building maintenance shops, etc. It is our intent to assign you according to the types of work you are interested in doing or obtaining information about for your future schooling or employment.

This questionnaire is used by the Civilian Personnel Office in placing you in the type of job you are qualified to do, would like to learn to do, or learn more about. Please answer the questions as honestly and sincerely as you possibly can.

Check the answer which describes you best:

Check One

1. Are you still attending school? Yes____ No____

2. Highest school grade completed: 6-8___ 9____ 10____ 11____ 12____
High School Graduate_____

3. Are you planning to return to school? Yes____ No____

4. What type of high school course did you or are you taking? Gen Crs___ College___

5. What kind of work would you like to do at Davis-Monthan AFB? (Identify first, second, and third choices in black and underline any specialty.)

_____ a. OFFICE - clerical, typing, filing

_____ b. SHOPS - plumbing, carpentry, electrical, mechanical, painting, grounds maintenance

_____ c. SUPPLY - clerical, typing, warehousing

_____ d. TRANSPORTATION - motor vehicle servicing

_____ e. SERVICES - mess attendant

_____ f. COMMISSARY - stock handling, warehousing, meat market, produce, clerical

_____ g. COMPTROLLER - clerical, bookkeeping, typing

_____ h. AIRCRAFT STORAGE

_____ i. MISCELLANEOUS ASSIGNMENTS

6. What high school course(s) have you taken that would help you in your selection? List, such as, typing, woodshop, auto mechanics, etc.

_____

_____

_____

7. If your answer to Question No. 6 is "None", check which most nearly describes the basis for your choice in Question No. 5:

Job Knowledge _____ Want to Learn _____ Future Employment _____

8. What are your plans for the future:

Return to School _____ Find a Job _____ Learn a Trade _____

9. Would you like counselling to help you prepare for:

Future Employment _____ School _____ Trades _____ Apprenticeship _____

10. Would you prefer individual counselling _____ or group counselling _____?

EXEMPLA VOCATIONAL EDUCATION I GRAM
TUCSON HIGH SCHOOL OFFICE
TUCSON, ARIZONA 85705

Date:

NAME	AGE/ YEAR	CAREER INTEREST	BACKGROUND	REMARKS

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Model Cities program

Lessons teach students to work

By ADOLFO QUEZADA
Citizen Staff Writer

Described as a potential dropout at the start of the school year, Rachel Valencia now has a genuine interest in education, according to one of her teachers.

What happened?

"It's simple," explained Robert Myers, director of the Model Cities Exemplary Vocational and Educational Program. "Education has become relevent to her. She knows why she is learning certain things in school."

Myer's program, funded by the Department of Health Education and Welfare under the umbrella of Tucson's Model Cities program but administered by Tucson School District 1, brings the world of work into the educational experience of students in the Model Cities area.

"There are other programs in the school that provide working experiences for students while they're in school," said Myers, "but the difference is that we work with the potential dropout students, the ones with bad attendance habits and poor scholastic records."

Rachel, 16, is one of nine children and at the beginning of the year she thought of quitting school to help at home, maybe getting a job.

Instead, the EVE program advised her to remain in school and placed her as a teacher's aide 16 hours a week at $1.60 an hour. This summer she was placed with the Arizona Historical Society.

"She will do a little bit of everything," said her AHS supervisor. He said she will learn cataloging, art and secretarial duties.

Her salary for the seven-week summer program will be paid by the Neighborhood Youth Corps, which cooperates with the EVE program, but an AHS official said that "hopefully, we will be able to keep Rachel after the seven weeks on our own payroll."

— Citizen Photo

Historical work

Rachel Valencia, 16, polishes an ornamental gorget collar which once belonged to Emilio Kosterlitsky, head of the Rurales, the then dreaded police of Mexican dictator Porfirio Diaz. Miss Valencia works at the Arizona Historical Society through a Model Cities summer program.

Besides placing 24 students in business offices, medicine, banking, transportation, Davis Monthan Air Force Base, and many other fields of work, EVE provided a weekly class on work orientation. Myers said the class included human relations, getting along with fellow-employes and the boss, interviewing for a job, preparing resumes, writing a letter of application and group relations.

"Some of the students had never heard of a resume before," said Myers. He said, "I was very surprised to see how limited their knowledge was about how to make a living besides in auto mechanics and office work."

Students participating in the program work from 8 a.m. until noon and attend classes in the afternoon. They carry a full load and are usually out by 4:30 p.m.

Myers admitted that the scholastic records of participating students did not take a drastic turn for the better. He said, "Our goal was to keep them in school and you know what? It worked."

Beyond keeping them in school, however, the program provided them with career information and even some personal counseling.

Alice Varela, assistant to Myers, visited homes and held noon rap sessions daily in her tiny office with the girls and some of the boys in the program.

"We talked about everything," said Miss Varela. "The girls want to talk about some of the personal problems that they have at home or just exchange personal experiences they encounter on the job," she said.

"We don't pretend to be a counseling staff for the school," said Myers, "but Tucson High has only seven counselors with 400 students assigned to each of them and it is physically impossible for them to see all of those students in one school year. I think we help fill a need," he said.

Myers said that the employers usually paid the salary of the participating students but that some salaries were paid by the Neighborhood Youth Corps.

Myers personally went door to door to recruit the participating employers. "I wore out two pairs of shoes getting them," he said, "but it was worth it. Next year we'll try to place 50 students."

He said, "We want to open their eyes and let them know that there are many different jobs from which they can choose.

"If we can teach these students to walk into an employer's office and tell him what it is they want to do, instead of 'I'll do anything,' we will have accomplished our goal."

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BIBLIOGRAPHY

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1271

VT 017 154
GUIDED OCCUPATIONAL ORIENTATION PROGRAM.
INTERIM REPORT, VOLUME III.

SYRACUSE CITY SCHOOL DISTRICT, N.Y.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
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DESCRIPTORS - *RESOURCE MATERIALS; *CAREER EDUCATION; VOCATIONAL DEVELOPMENT; *OCCUPATIONAL GUIDANCE; *DEVELOPMENTAL PROGRAMS; ELEMENTARY GRADES; SECONDARY GRADES; JOB PLACEMENT; *PROGRAM PLANNING; INSERVICE PROGRAMS; CITY WIDE PROGRAMS; DISADVANTAGED YOUTH; GOAL ORIENTATION; EDUCATIONAL OBJECTIVES; WORK EXPERIENCE PROGRAMS; JOB TRAINING

ABSTRACT - THIS FEDERALLY FUNDED EXEMPLARY PROJECT IN VOCATIONAL EDUCATION IS INTENDED TO MODIFY THE PUBLIC SCHOOL SYSTEM OF A MEDIUM-SIZED CITY BY INTEGRATING VOCATIONAL INFORMATION, OCCUPATIONAL GUIDANCE, JOB TRAINING, AND JOB PLACEMENT ACTIVITIES INTO CURRICULUMS AT THE ELEMENTARY AND SECONDARY LEVELS. OCCUPATIONAL ORIENTATION WILL TAKE PLACE IN KINDERGARTEN THROUGH GRADE 4, SKILL TRAINING IN GRADES 5 THROUGH 8, AND SPECIFIC OCCUPATIONAL COUNSELING AND WORK EXPERIENCE PROGRAMS IN GRADES 9 THROUGH 12. INSERVICE PROGRAMS WILL BE INCLUDED FOR ALL GRADE LEVELS. THE MAJORITY OF THIS INTERIM REPORT CONSISTS OF EXTENSIVE RESOURCE MATERIALS, SEPARATED INTO 23 TABBED SECTIONS. (AG)

VT 017 154

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INTERIM REPORT

VOLUME III

G.O.O.P.

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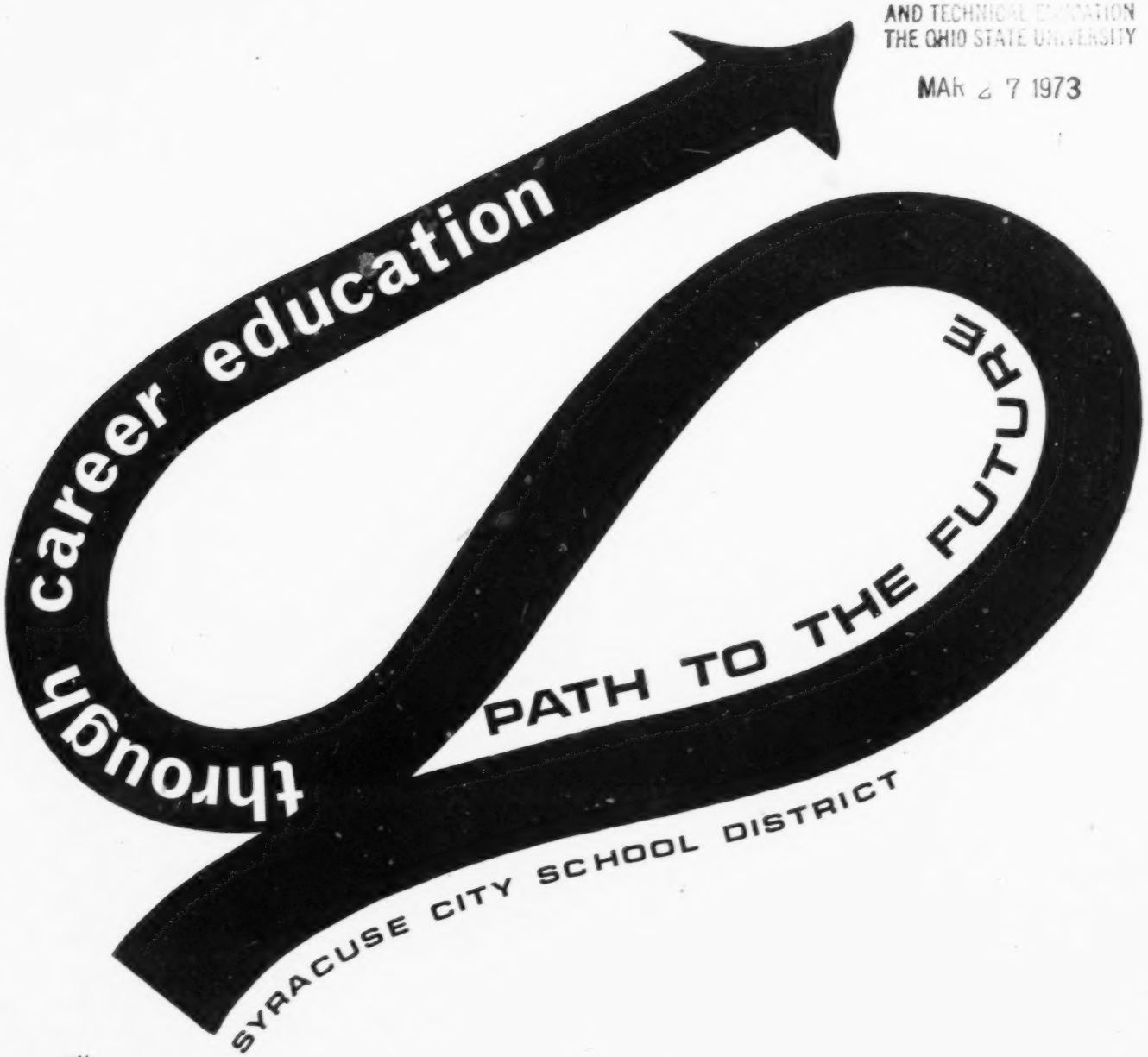

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INTERIM REPORT

PROJECT NO. 0-361-0143
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GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

VOLUME III

Mr. Hans Lang, Director
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

February, 1972

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INTERIM REPORT

PROJECT NO. 0-361-0143
CONTRACT NO. 0EG-0-71-1028 [361]

GUIDED OCCUPATIONAL ORIENTATION PROGRAM

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

The project reported herein was performed pursuant to a grant with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

VOLUME III

Mr. Hans Lang, Director
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

February, 1972

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

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PROJECT TITLE:	Guided Occupational Orientation - Training and Job Placement Program
APPLICANT ORGANIZATION:	Syracuse City School District Syracuse, New York
INITIATED BY:	Dr. Edwin E. Weeks, Jr., Acting Superintendent of Schools
TELEPHONE:	315-474-6031
PROJECT DIRECTOR:	Sidney L. Johnson, Assistant Superintendent for Occupational and Continuing Education Assistant Directors Vincent F. Brennan, Supervisor, Special Needs Programs Dr. Mary C. Durkee, Supervisor, Intermeidate Grades, Elementary Education
SUBMITTED BY:	Dr. Edwin E. Weeks, Jr., Acting Superintendent of Schools Syracuse City School District 409 West Genesee Street Syracuse, New York 13202
DURATION:	February 1, 1970 to June 30, 1972
TIME:	29 Months
DATE TRANSMITTED:	December 24, 1969

BACKGROUND DATA

1. This proposal has not been submitted to any other agency or organization .

2. Similar proposals previously submitted to the U.S. Office of Education:

   a. ED 030-720
      Bureau No. BR 5-0009

   b. ED 016-268
      Bureau No. BR 6-8744

   c. ED 010-295
      Bureau No. BR 5-0157

   d. ED 003-107
      Bureau No. BR 5-1323

   e. ED 010-282
      Bureau No. BR 5-0088

   f. ED 010-076
      Bureau No. BR 0123-NO-1

   g. ED 027-435
      Bureau No. BR 5-0160

   h. ED 026-527
      Bureau No. BR 5-0114

   i. ED 015-513
      Bureau No. BR 6-1620

   j. ED 011-044
      Bureau No. N. A.

   k. ED 025-641
      Bureau No. BR 5-0005

   l. ED 024-752
      Bureau No. BR 5-0009

   m. ED 010-620
      Bureau No. BR 6-2958

   n. ED 010-074
      Bureau No. BR 5-0124

3. This is not a proposed extension, continuation, or addition to a project previously or currently supported by the U.S. Office of Education.

4. December 24, 1969 is the date of submission to the New York State Department of Education.

5. There has been no participation by the U.S.O.E. staff members.

6. Local Education Agency.

7. This is an application for a grant.

8. City Syracuse Congressional District 34th

   County Onondaga Postal Zip Code 13202

   State New York

9. Same as above - number 8

10. Date of Assurance of Compliance - January 26, 1965 #738878

ABSTRACT

TITLE: Guided Occupational Orientation - Training and Job Placement Program

PROJECT DIRECTOR: SIDNEY L. JOHNSON

APPLICANT ORGANIZATION: SYRACUSE CITY SCHOOL DISTRICT
SYRACUSE, NEW YORK 13202

DURATION OF PROJECT: February 1, 1970 - June 30, 1972

TOTAL FEDERAL FUNDS REQUESTED: _____

The project is designed to obtain authority, and if the authority is granted, to proceed with modification of a school system of a medium sized city. The modification hopefully will result in recognition of occupational information and skill attainment as inseparable components of learning stages and exercises from pre-school and kindergarten upward. Orientation will commence at the start of primary education and continue through the fourth grade. Beginning with the fifth grade guided occupational orientation and skill training will commence and the "learning by doing" process will be intensified and continue through the eigth grade or age sixteen. At this point it is expected that counseling, simulation of industries and crafts in the schools, general work experience on the job with continuing basic education part-time, cooperative education in a chosen career field, post-secondary, technical, and preparation for higher education will emerge as the continuum of the system. This comprehensive project will embrace the total philosophy and all facets of vocational-technical education as a necessity for the individual, his community, and his country.

D. BODY

1. PROBLEM:

   a. Many youth, particularly those from the low socio-economic and academically disadvantaged groups, aspire unrealistically in terms of their own potential to job careers and job goals.

   b. Educators are not adequately prepared to present occupational information to students in a systematic procedure.

   c. Many youth, particularly those from the low socio-economic, disadvantaged and academically deprived groups, are not adequately prepared to adjust and find success in our complex social and economic society.

   d. There is a lack of understanding among many people: educators, parents, students, employers - of the dignity, worth, the satisfactions derived, the opportunities available and the contributions that can be made from all levels of occupations.

   e. There is lack of a plan to involve cooperation between public education and manpower agencies to the end that both share responsibility for job preparation of all students.

1. Our school district recognizes the above cited problems and proposes to take preventive and corrective action in dealing with them as outlined in this proposal.

2. DESCRIPTION

1. Provided with authority from the Board of Education through the Superintendent, the professional staff (administrators, supervisors, counsellors, and teachers) will reorganize the scheduling and instructional approach, and shift the emphasis from general basic education to integration of occupational education and general academic education (English, Social Studies, Science and Mathematics). The staff will produce revised outlines of courses of study that allow the individual continuing study opportunities or intensive occupational training for entry level placement.

Elementary - 5th and 6th Grade

This proposal is designed to begin in Grade 5. However, there is presently included in grades K through 4 an occupational orientation program.

On the kindergarten level, students engage in role playing, simulations and discussions about various workers. They learn about "helpers" in the neighborhood, people who work in the school, jobs their parents hold. Much of the equipment used in the kindergarten is geared for this program - trucks, wheelbarrows, traffic lights, toy stoves, toy stores, etc. Vocabulary developed in the reading readiness program also relates to a great extent to the world of vocations.

In the upper primary grades, an extensive Social Studies unit is used throughout the district revolving around Community Helpers; S.S. books, films, filmstrips, tapes, trade and library books are used relating to this unit. Community resource people are utilized in the classrooms - firemen, policemen, druggist etc.

A portion of the 4th grade S.S. curriculum includes a study of Syracuse from earliest days to the present. A general overall view of the historical, industrial and scenic phases of the Community for a brief exposure to such places as the newspaper office, a supermarket warehouse, the police department, Niagara Mohawk etc.

2. This proposal is designed to intensify the vocational-industrial skill development aspects on the 5th and 6th grade levels.

A writing team, comprised of 5th and 6th grade teachers will meet for a two-week period in in-depth intensive curriculum development sessions. The material developed will be used as a vehicle for career study, presented in an individualized fashion, catering to differing student learning roles, styles, interests and reading abilities.

3. The team will also identify areas in the present Social Studies, Mathematics and Science curricula where a model or manipulative device will enhance the lesson. The description of these specific models will serve as the curriculum for the Industrial Skill Development Phase of the program.

The materials will be packaged so that students may learn about a series of occupations and careers. Similar concepts were used by schools of San Diego County, California and reported in the ERIC system (ED 015-513). Also, the Portsmouth, Rhode Island, school system has been using this approach to individualized learning since 1965. Positive results have been reported in both the above instances. The individualized approach becomes an integral part of the 5th and 6th grade proposal.

After the occupational curriculum materials have been developed by the teacher writing committee, two mobile vans will visit schools to disseminate and create interest in these materials. The first van will be used to house booths designed to give students a glimpse into various job categories in existence. Each job category will have general display (pictorial and narrative), perhaps an exhibit of some equipment used, a listening center, film and filmstrip projector, and resource people from industry.

This van will be used as a kick-off to the Vocational Information part of the program. Students will come into the van, armed with a Learning Activity Package. (LAP*) The Teacher Assistant will give students a general orientation as to why they are in the program, stimulate interest in the program, and instruct students as to how they are to utilize their time in the van. The LAPs will contain question sheets. Students browse around the van getting a general overview and answering general questions, then choose 3 or 4 occupations to pursue in greater depth. When the choice is made, the student then goes to the appropriate booths with his LAP. The LAP will contain a series of tasks for students to perform. They may be instructed to interview the representative at a booth with a series of questions, to view a filmstrip and find and write answers to questions, to examine display materials in search for answers to questions, to consult with the teacher and/or teacher assistant in search for information, etc., use the listening center which may explain some of the material in exhibit.

Back in the classroom, the student continues working on his LAP - summarizing information gleaned from the Van, identify additional information he needs, consult trade books to find further answers, engage in role playing and other group activities, plan and go on field trips for additional

knowledge. This part of the program will develop Language Arts skills (such as interviewing techniques, note taking using reference books, writing summaries), reading skills (trade books on various reading levels catering to individual interest will be used), and some basic concepts of economics.

*A learning activity package is a unit of work written for students to pursue individually. The content is written on three different reading levels. Reading level, time and style are varied to suit individuals, utilizing a multi-media approach.

For example, a non-reader may be exposed to a particular content by listening to a tape. A student of average reading ability may read the material as written. A better student may be given the material in greater depth and at a higher level of sophistication. Films, filmstrips, records, tapes, library books and all types of materials which will be utilized in LAPs.

The other van, the industrial skill lab, will be equipped to service a class of 30 students.

The teacher writing team will have identified and described in the Social Studies, Science and Math curriculum, models that students can make which can be taken directly back to the classroom to use.

For example, students will be instructed to make such manipulative devices for math as fractional parts kits, geometric figures, time lines. Students can then take these models to the math lesson and demonstrate their use. They could also go to other rooms to help demonstrate their use.

A similar approach would be used for science. Various equipment such as beam balances, levers, weather instruments, animal cages could be made in the Industrial Skill Lab and likewise be demonstrated and used in science classes.

Dioramas, maps and other models could likewise be made to enhance the Social Studies class.

Our aim is to give students an opportunity to handle tools, learn to use them correctly, and also to make an actual contribution to a lesson. All too often, poor readers have been penalized in all subjects because most lessons are heavily oriented in utilization of the reading skill. Many behavior problems and evidences of lack of motivation stem from the fact that students go through a series of classes without any success experiences. Bringing a model to a class that the teacher can use and the student can demonstrate to his peers hopefully will add to a child's feeling of self-worth.

In conjunction with the above, teacher education programs will be made available to target area school teachers for the integration of career planning materials into the curriculum.

JUNIOR HIGH

A complete integration of occupational education material is planned for the Junior High level. This consists of total involvement of all teachers to the guided oriented program.

The occupational areas to be introduced to the student will be:

1. Agriculture
2. Distribution
3. Health
4. Home Economics (wage earning)
5. Office
6. Trade and industrial
7. Technical

The seven broad curriculum content occupational areas will involve information for those interested in service level occupations to those interested in professional occupations.

As a basis for the above thinking, project ABLE (ED-030-720), established in New Quincy, Mass., provided occupational curriculum for grades 7, 8, and 9. Another USOE project which involves itself with career planning for the Junior High level student was a career simulation for adolescent pupils reported by the San Diego County Department of Education (ED 016-268).

A new concept employed in this study will be to establish an in-service education program for guidance counselors, teachers, administrators and representatives from industry.

The aim of this in-service program will be to acquaint guidance counselors with the needs, goals and opportunities that industry has to offer to the non-college bound youth. Teachers will become involved with the actual integration of occupational orientation into the present curriculum. The representatives from industry will have a long hard look at their own job descriptions and prerequisites.

In particular each teacher will use his subject area to provide related occupational education geared to the level and experience of students. Guidance counselors will become more vocationalized in knowledge and competency to work with a student or group of students.

This comprehensive in-service training for all Junior High School personnel in the area of occupational education and the integration of occupational education in all curriculum is a unique and major step in making general education relevant.

SENIOR HIGH

A similar in-service training program, as established for the junior high, will be given to the senior high school guidance counselors, teachers, administrators and representatives from industry.

The program is designed to prevent secondary school age youth from leaving school before they are employable, and to provide an attractive occupational preparation program for youth who are out of school and unemployed or underemployed. The school district is convinced, by results of limited existing similar programs, that work experience with related counseling is an effective way of serving some students. We want to develop and implement a work experience program of occupational education for the disadvantaged student so that the emphasis will be on behavioral modification, job success and improved skill competency.

Syracuse is concerned about the number of our youth who leave school at age 16 or before completing a secondary school program. In reviewing our research department's report on dropouts last year, 1968-69, we note that 549 were reported as dropouts for Senior High Schools and 100 from Junior High Schools. The largest number left from the tenth grade. We feel certain that these youths were educationally and vocationally handicapped and left because they found it difficult to function successfully in our regular program.

The need for identifying such students and providing educational experiences to improve their self-concept, scholastic interest and occupational competence is most vital. The problem demands top priority and action in finding ways of reaching these students and providing them with individual counsel and help.

The work experience concept in education has been proven to offer a challenging and effective means of providing stimulus to remain in school and continue education. The Syracuse University Research Corporation, in its recent report to the Statler Foundation entitled "Broadening the Experiential Base of Education, June, 1969", recommended Work Study as a part of general education for all students. The New York State Education Department, Bureau of Occupational Education Research, has conducted a successful GUIDED OCCUPATIONAL TRAINING work experience program, VEA Project #68-6-256, January, 1969, in Oceanside Senior High School, Long Island.

Work experience programs have been in operation in Syracuse for 10 years and we now have five effective programs: office occupations, distributive education, industrial diversified occupations, school to employment program and special education placements. However, they are not designed or sufficient to serve the students reaching age 16 in the critical 9th and 10th grade levels, where the leaving-school practice is concentrated.

Students who participate in the general work experience program will be given this opportunity and encouraged to register in our other work study programs during their 11th or 12th grades. This early introduction to work experience will eventually require an expansion of our other work study programs.

WORK EXPERIENCE PROGRAM FOR SECONDARY STUDENTS

The program will serve all students 16 years of age and older who are identified as potential dropouts as well as those out of school youth who can be encouraged to return. Four Occupational Resource teachers (O.R.) (one from each school) will be appointed for our Senior High Schools and each will be responsible for working with the Junior High Schools assigned to him. The O.R. teacher will serve as a personal-vocational counselor and supervise work experience through regular visitations to job stations. His functions are essentially as follows:

1. Interviews potential dropouts as referred by school and dropouts invited in for interview, and explores with each student how the general work experience program may best serve him.

2. Consults with school administrators and teaching staff about curriculum and program modifications that would benefit youth with special needs.

3. Communicates with the parents of youth who have been identified as needing a work-related program. Parents must be informed of the nature and purpose of the program, and encouraged to support their child's involvement in the program.

4. Make use of Community resource help such as:

   a. New York State Employment Service - we are expecting this agency to assign two vocational counselors (one for each two schools).

   b. Community Agency Resources (Chamber of Commerce, Manufaturers Association of Syracuse, etc.).

   c. Volunteers selected from business and industry.

   d. Others to be determined.

5. Help student decide on committed plan of action geared to his career development.

6. Find employers in cooperation with the New York State Employment Service who will provide part-time work experience and supervise the on-the-job work.

7. Act as a liaison between the student and his teachers in order to insure that instruction is related to work experience.

8. Evaluate and keep records on progress of each student beginning with the first interview.

9. Provide related classroom instruction to make work experience more meaningful to student.*

*Curriculum for Related Instruction
Why education is important.
Career planning.

Occupational orientation

Attitudinal and behavioral development

Appraisal of interests and understanding abilities.

Employer-employee relationships and responsibilities.

Personal and job related problems.

Health and safety.

Opportunities for advancement in the world of work.

Students will receive one unit for Regents credit for 400 hours of work experience and one-half unit for 200 hours. Students who are able to take the full related instruction program will receive an additional unit of Regents credit.

The O.R. teacher can be the most important person in the lives of the students who participate in this program. He should be a person who can relate well to the disadvantaged student and have occupational and counseling background to effectively help influence and direct students.

A unique feature we hope to include in one senior high school - Central - where we have the largest number of disadvantaged students, is an academic core center with a related teacher to work with students in the work experience program. The core teacher will complement the work of the regular teacher in the areas of communication, computation and citizenship. This teacher will use individualized instruction and programmed learning as well as other recognized methods to help students improve basic skills in line with individual's ability and occupational needs. This will give support and assistance to classroom teachers in adjusting to individual differences. This core teacher will need to spend time in preparing and developing methods to be used for instructional work. Students in this special instructional program will comprise a control group for comparison with other students in the same school and the other three high schools.

It should also be emphasized that scheduling in occupational-academic areas will be flexible and individualized to allow a student to spend as little or as much time in the class or laboratory as his individual needs require. This is an innovation in our proposal.

Those students, after intensive counseling, who wish to leave the secondary school will be provided with intensified proficiency training in a selected occupation so as to qualify for employment at the entry level. They will be offered participation in work-experience and continuing education programs (upgrade, etc.).

COMMUNITY COLLEGE

Articulation between the school district and the community college will not only involve the work-study graduate who has determined an advance career goal, but the other participants in the program as well.

The junior-senior high school programs are based on the following from the ERIC System:

ED 010 295

ED 027 435

ED 026 527

ED 011 044

ED 025 641

ED 024 752

ED 010 620

ED 010 282

3. OBJECTIVES:

A distinction will be established between overall, broad objectives and objectives which are more specific, sharply defined, clearly stated and capable of being measured.

BROAD, OVERALL OBJECTIVES

a. To present to youths in an understandable way, the world of work and career planning.

b. To encourage youth to realistically aspire to job careers and job goals commensurate with their potential.

c. To establish in-service education programs for educators to present occupational information to students in a systematic procedure.

d. To adequately prepare low socio-economic disadvantaged and academically deprived youth for success in our complex social and economic society.

e. To provide greater understanding and information to educators, parents, students, employers of the dignity, worth, the satisfactions derived, the opportunities available and the contributions that can be made from all levels of occupations.

f. To develop a plan of cooperation between public education and manpower agencies to the end that both share responsibility for job preparation of all students.

g. To encourage and guide students to continue their secondary education - general and occupational.

h. To identify through school records and attract through elicitation in-school and out-of-school youth who need occupational education and successful on-the-job training.

i. To find meaningful job placements where a student will have an environment in which he can succeed and develop self-respect and dignity through cooperative efforts of the school district, New York State Employment Service, and the community at-large.

j. To provide occupational orientation and continuing information for career planning and advancement.

SPECIFIC OBJECTIVES

Grades 5 & 6

3. Objectives - Career Information Phase

a. Given an array of career choices (via mobile exhibit and presentations) students will select vocations to study in depth.

b. Upon selection of vocations to study, students will participate in interviews for information regarding job opportunities, training needed, remuneration, opportunities for advancement and desirable personal characteristics.

c. Given opportunities to conduct interviews, students will take notes and organize data derived from interviews, as well as learning about the occupation itself.

d. Given identity of students interested in similar vocations, students will join groups in quest for and sharing of information, allowing for group participation, as well as occupational career information.

e. Given printed and non-printed resource material, students will gather additional information, allowing for individual learning and self-motivation.

f. Given general outline for career information quest, student or students in groups will organize scrapbook of data collected, to be used as a reference source for himself and other students.

g. Given opportunity to collect background information, students will be able to discuss merits of one career as compared with another in group situations (based on information rather than emotion or off-the-cuff opinion) to provide better knowledge re careers.

h. Given variety of materials, student will develop habit of using several resources before making a judgment.

i. Given task of making some career options, student will consult resource people to get additional information and to help him make some tentative decisions.

j. Given exhibits to view and opportunities to take field trips, students will ask questions other than those suggested in the LAP.

k. Given opportunities to take field trips, student will help in planning the trip, i.e. deciding what information he needs, which people or department he might concentrate on etc.

l. Given opportunities for field trip or interview, student will prepare a report to share information received.

m. Given a variety of source material, student will document information received (i.e. - include bibliography, quote with foot notes, etc.).

n. Given set of basic questions relating to various careers, students can answer questions regarding three career choices.

3. Objectives - Industrial Skill Phase

a. Given a pattern to follow, student can cut out pattern for a model.

b. Given set of directions, student can make a completed model.

c. Given samples of typical lesson plans in math, social studies, or science, student can help decide on what models could be built that would make the lesson more meaningful.

d. Having completed a model, student can demonstrate its use during the appropriate lesson (for his class or other classes).

e. Having completed model, student can help another student who might be having a problem performing a similar task.

JUNIOR HIGH SCHOOL

3. Objectives

a. Provided with the total Junior High School occupational orientation, the student will show a desire and be able to make a tentative selection of career education that he will pursue in Senior High School.

b. Given the opportunity to learn about and discuss occupational information in all classes, student will become inquisitive and develop the habit of asking questions and seeking more assistance in making career decisions.

c. Provided with introductory occupational experiences, the student will approach the related occupational simulation in the classroom with increased attention and proficiency.

d. Provided with individual and group counseling, the student will better understand himself and how he can prepare for the world of work in line with his interests and abilities.

e. Given related occupational education in each subject area (English, Social Studies, Science and Mathematics), the student will show improvement especially in communication, computation and citizenship.

f. Provided with integrated occupational learning (fusion of occupational instruction with general academics), student will become involved in doing reports, projects and other activities that are meaningful for career planning.

g. Provided with school occupational orientation - parents will encourage and support their children's involvement in the program.

SENIOR HIGH SCHOOL

a. Provided with the overall program of counseling, work experience and related class instruction, student will:

1. be interested in remaining in school;
2. give evidence of a constructive attitude toward school, teachers, friends, parents and others;
3. develop acceptable behavior response in school and on the job;
4. develop a better self image and more self confidence;
5. experience success in school and on the job;
6. develop positive attitudes toward personal and citizenship responsibilities.

b. Provided with related classroom instruction in line with his occupational interests and individual needs, student will improve his knowledge of basic academic skills necessary for employment in any area.

c. Given work experience learning, student will:

1. find gratification and satisfaction in this occupational setting;
2. receive employer's approval for work performed under his supervision.

d. Provided with intensive counseling, student will be able to handle adjustment problems to supervision in school and at work.

e. Provided with a list of job vacancies by the Employment Service counselor the pupil will follow prescribed application procedures or telephone for an interview, and receiving same, proceed to get release from school and appear before the employer to apply for one or more of the advertised vacancies. The pupil will report the outcome of his search to the Employment Service counselor.

5. Procedures

a. General Design:

1. The approach is highly individualized in terms of pupil's career interests as well as his ability to find and assimilate information.

2. The design provides for pupil involvement - pupils in a "doing" role rather than a "listening" role.

3. The program provides some concrete experiences where pupils who might perhaps have a reading problem, finds success in making a model, prestige in knowing that the model contributed to an actual lesson (the teacher needs and uses what he makes).

4. The program provides concrete experiences for pupils to gain some manual dexterity.

5. The program, without preaching, imbues child with appreciation for dignity of work and gives him a hopeful future within his academic and financial grasp.

6. The program involves business and industry as co-partners in providing real life experiences in understanding community occupation needs and career choices.

7. The program provides for use of advisory committee to help establish direction for determining occupational needs and program changes.

8. In-service education will be established as a cooperative partnership with business and industry to provide real functional opportunities to up-date understandings and knowledge by participating in activities in community businesses and industry by using business and industry staff as resource teachers in the schools.
(See also 2 Under Body - Description for specific details of program).

b. Schools or Locations

Ten elementary public and five non-public schools meeting the criteria for Title One and ESEA services will be included in the program. All secondary pupils in the school district and disadvantaged students from parochial schools will participate.

c. Participants

Approximately 2200 fifth and sixth grade students will be participating, many under-achievers, from lower socio-economic areas. The total elementary school population is about 21,000.

Students involved in this program the first round will be about 10% of the elementary school population. Students from 58 public school classes and 15 non-profit private school classes will participate. The students from the non-profit private schools will be drawn from the same geographic and socio-economic areas as those from public schools.

The school district's existing policy is to assign secondary school pupils to junior and senior high schools so as to maintain a balance in race and affluence. These policies have been in effect since 1966 and continuation is assured.

d. Methods and Materials - Elementary

Heavy emphasis throughout the program will be placed on a multi-media approach. Because of the reading difficulties of many of the students, the program must not rely too heavily on reading as the tool for instruction. The LAPs will contain directions for students to refer to a film, filmstrip, diagram, record/and filmstrip, or trade book. In many cases available material will have to be re-written on an easier reading level. Representatives from business and industry will be interviewed by students who will organize the answers on a form prepared in advance by the teacher and students. Experience charts will be used to summarize the data a student collects in his quest for career information. Students themselves will prepare direction sheets for teachers and other students to refer to in using the models built in the Industrial Skills Lab.

For further details regarding LAPs and vans, see #2 (Description). (For reference to Research see B- Background Data).

Examples of Trade Books to be considered for use:

Voice of Tools and Machines

How People Earn and Use Money

How People Live in the Big City

The Jobs You Get

The Person You Are

The Newspaper You Read

Estimated Total $7,000.

Examples of filmstrips:

The Job Interview

The Nurse's Aide

The School Cafeteria Worker

ABC's of Geeting a Job		
The Gas Station Attendant	Estimated Total	$2,000.
Examples of films:		
Just a Secretary		
Just a Teller		
Looking for A Job		
Big City Workers	Estimated Total	2,000.
Other Types of Materials		
Transparencies such as "Everyday Economics"		
SRA Lab - "Widening Occupational Roles Kit"		
Guidance Materials - "A Book About Me" "What Could I Be?"	Estimated Total	2,000.
A-V Equipment		
Tape recorders and head sets		
Filmstrip previewers		
Record Player		
Listening Centers		
Picmobile & movie projector	Estimated total	2,000.
Total for Career Information Booth in Van		$15,000.
General Mechanics Tool Sets (2 @ $500.) (See lists)		1,000.
Instructional Supplies (15 schools @ $100.) (Lumber, nails, metal, glue, solder, miscellaneous hardware)		1,500.
Shop Tools		3,500.
Total for Industrial Skill Lab		$6,000.

General Mechanics Tool Sets

First Aid Kit
Portable Vacu-Vise
Stanley Handiman Vise
Wood Workers Vise
"C" Clamps
#32 Spring Clamps
Disston Back Saw
Dovetail Saw
Coping Saw
Tubular Hack Saw
Miter Box
Block Plane
Spoke Shave
Hand Drill
Drill Points for Hand Drill
Rose Type #137 Countersink
XCelite Screwdriver 4"
Bit Brace
Auger Bits
Screw Driver Bit
Coping Saw Blades (many)
Hack Saw Blades
Staple Gun Tacker - 5/16" staple
Staples, 5/16"
General combination Miter Square
Bench Rule - 2'
Folding Rule
Ripping Chisel
Riveting Hammer
Nail sets - 3/32" & 1/8"

Sloyd Knife
"Handyman" Nail Hammer - 13 oz.
Nail Hammer - 10 oz.
Ball peen hammer - 6 oz.
Ball peen hammer - 8 oz.
Ball peen hammer - 12 oz.
Rawhide Mallet
Carpenters Mallet
Cabinet files for wood
Wood Files - flat
Wood Files - half round
File Cleaner
Pencil Compass
5" Diagonal cutting pliers
Straight nose pliers
Long nose pliers
Parallel Jaw pliers
Adjustable wrench - max. opening 3/4"
Auto wrench - 9"
Jewelers Straight shears
Vise-grip sheet metal tool
Pocket snips - 7"
Protective goggles
Soldering Iron
Soldering gun-weller
Soldering paste
Sal-Ammoniac Bricks
Bench Anvil
Hand Saws
Fire Extinguisher - CO_2

d. Methods and Materials - Secondary

Materials and methods for the Junior High School integrated occupational education program will be modified from the experience of other projects listed under BACKGROUND DATA - B.

In the Senior High Schools, students will be referred to the occupational resource teacher after the school (public or private) has carefully identified each as a potential dropout - a student who will not remain in school. A dropout student will be referred immediately unless the school administrator wishes to make an exception for special reasons. Specific procedure for student referred will be developed in conferences with administrators and guidance counselors.

In the early implementation of the program, studentw will be accepted on the basis of greatest need. Enrollment figures as of September 1969 showed 5951 students in our four Senior High Schools and 6689 students

in our nine Junior High Schools. There are also eight Parochial High Schools with an enrollment of 3934 which will be served by the program.

It is expected each O.R. teacher will serve during the school year approximately 100-150 students with the assistance of the New York State Employment Service counselors. Factors such as placement opportunities and number in full time related programs will have an effect on total students served. Emphasis will be placed on serving each pupil well in line with his individual needs and capabilities.

e. Evaluation - Elementary

1. In designing and implementing the program (both the Career Information phase and the Industrial Skill Lab phase), provision will be made for a check list of each child. The teacher will use this check list to determine whether specific objectives are being met. (See D-3-Objectives). Objectives tapping both the affective and cognitive domain have been included in the planning.

2. For the Career Information program, the LAPs will include, as a standard feature, a pre- and post test which each child must take.

3. In addition, sixth graders' progress in assimilating career information will be assessed as the SRA Lab "Widening Occupational Roles Kit"(or similar instrument) is used. Each student is provided with a Student Record book for this.

4. For the Industrial Skill Lab, each child's performance will be assessed by a simple performance test in the Skill Lab -- i.e. ability to measure, make a pattern, use a saw, hammer, etc., paint----.

5. Summaries from each participating school will be forwarded to the Coordinator at the end of the school year to assist him in making an over-all evaluation, determining any modifications or new directions the program should take before continuance and/or expansion.

e. Evaluation - Secondary

Criteria to be used in evaluating the program:

1. Survey interest and reactions of Junior High School pupils on their readiness for career planning.

2. Comparison of number of students enrolled in program who complete the school year with numbers of past two years.

3. Comparison of attitudinal and behavioral changes at the end of the year with the time of entry by narrative reports from building administrators.

   a. Standardized tests results will be reported where applicable.

4. Employers' summary reports on adjustment to their success on the job will be summarized by the Supervisor, Work Experience.

TIME SCHEDULE
PROPOSAL FOR GUIDED OCCUPATIONAL ORIENTATION
TRAINING AND JOB PLACEMENT PROGRAM

	EVENTS	PEOPLE	TIME
1.	Brainstorming Session	Johnson, Durkee, Brennan Teachers	Dec. 69
2.	Writing of Proposal	Johnson Brennan, Durkee	Dec. 69
3.	Review of Proposal	"Brainstorming Committee"	Dec. 69
4.	Revisions	Johnson, Durkee	Dec. 69
5.	Meeting with Elementary Principals Explanation of Proposal Reactions to Proposal Commitment of Interested Schools	Elementary Principals Johnson, Durkee	Dec. 69
6.	Coordinator Meeting with Secondary Principals	Johnson, Brennan and Secondary Principals	Dec. 69
7.	Meeting of Principals with Staffs of Individual Schools	Elementary Principals and Teachers, Johnson, Durkee and Brennan	Jan. 70
8.	Posting of Notice for Positions of Coordinator, Teacher Assistant	Salmon (Ass't. Supt. for Personnel)	Jan. 71
9.	Ordering of Samples of Multi-Media Materials	Durkee, Brennan	Jan. 71
10.	Selection of LAP*[1] Writing Team	Durkee Elementary Principals	Jan 71
11.	Writing of LAPs & Skill Lab Curricula	Durkee, Coordinator, Teacher Assistant Teachers from participating schools	Feb. 71
12.	Printing of LAPs	Secretary	Feb. - March 71
13.	Purchase of Skill Demonstration Unit	Johnson, Business Office	Feb. 71
14.	Secondary Instructional Planning Team	Instructional Supervisors and selected teachers	Feb.-June 71
15.	Contacts with Business & Industry	Elementary Coordinator Teacher Assistant	Feb. - June 71
16.	Equipping Careers Information Center	Elementary Coordinator Teacher Assistant Business & Industry Representatives	Feb. - June 71

17.	Equipping Skill Demonstration Unit	Elementary Coordinator, Teacher Assistant	Mar.-June 71
18.	Teacher & Counselors Orientation Workshop	Assistant Directors Elementary Coordinator Teacher Assistant Consultant(s)?, Teachers (Elementary 5th & 6th grades Secondary Dept. Heads, Ind. Arts Teachers, Home Ec. Teachers)	July - 71 (1 week)
19.	Career Information Center Open for 18 Schools	Elementary Coordinator Teacher Assistant Classroom teachers Guidance Counselors	Sept. 71 - June 72
20.	Secondary Occupational Program Implemented	Counselors, Teachers Principals	Sept. 71 June 72
21.	Plans for Continuation & Expansion	Johnson, Durkee, Coordinator, Assistant Teacher Elementary Principals	Jan. 72 - June 72
22.	Implementation of LAPs	Classroom Teacher, Guidance Counselor	*2Sept. 71 June 72
23.	Skills Mobile Demonstration Unit on Road	Coordinator Teacher Assistant	*2Sept. 71 June 72
24.	Evaluation - Preparation of Interim Report	Independent Sub-Contractor	Jan. 72
25.	Secondary Teachers & Counselors Orientation and Curriculum Review Workshop	Assistant Directors Elementary Coordinator Teacher Assistant Counselors, Consultants Elementary & Secondary Teachers	July 72 (1 week)
26.	Continuation of Elementary and Secondary Programs	Central * School Staffs	Sept. 72 June 73
27.	Evaluation - Preparation of Interim Report	Independent Sub-Contractor	Jan. 73
28.	Continuation of Elementary and Secondary Programs	School Staffs	Sept. 73 Jan. 74
29.	Evaluation - Preparation of Interim Report	Independent Sub-Contractor	Jan. 74

*1 - LAP - Learning Activity Package
*2 - Schedule to be arranged for each school

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6. Coordination and Dissemination:

The Department of Curriculum and Instruction, the Department of Pupil Services and the Department of Occupational and Continuing Education have been charged by the superintendent with the responsibility for a unified approach to full integration of occupational education into the school system's standing programs. This approach, if successful, will be the essence of the school district's 5 year plan for a vocational education as directed in the New York State plan and will be presented for inclusion in the regional vocational plan required by the New York State plan. Once the local plan is integrated into the regional plan it will serve as a vehicle for economical implementation in small school districts in the region who do not participate in exemplary program experimentation.

7. Personnel:

Name: Sidney L. Johnson Birth Date: 12/5/21
Title of Present Position: Assistant Superintendent of Schools for Occupational & Continuing Education
Social Security No. 260-05-9256
Title of Address: Mr.

Proposed time commitment if this project is funded:

	Percent of Time
Teaching Duties	
Continuing Administrative Duties	75
Consultant Services	
Time devoted to other projects:	
Time to be committed to this project	20
Other Time Commitments - Industry & Community	5
TOTAL	100%

Brief statement of background, experience, and qualifications:

21 years personnel administration and training - U.S.A.F.
7 years experience in education: 2 years teaching business education, 2 years administration of Manpower Development and Training Programs, 2 years school business administrator and 1 year occupational education.

B.S. Business Administration.
M. of Business Education.

N.Y.S. Certificate: School District Administrator.
Other Certificates: Teacher, Secondary Principal, & School Business Official
87 graduate credit hours: Business and Educational Administration.

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7. Personnel: cont'd.

Name: Dr. Mary C. Durkee
Title: Assistant Director
Social Security Number: 114-20-0677
Experience and Qualifications: Ph.D in Education.
Over 20 years experience in elementary education as a classroom teacher and building administrator and supervisor of curriculum and instruction for elementary/intermediate grades.

Name: Vincent F. Brennan
Title: Assistant Director
Social Security No. 132-14-5191
Experience and Qualifications:
Masters in Education
Over 20 years experience in education as a classroom teacher, building administrator, school district superintendent, supervisor of Manpower Development & Training Programs and supervisor of special needs and work experience of the local occupational education programs.

8. Facilities:

In addition to the vans being requested for the 5th and 6th grade programs, the 9 junior high schools and 4 senior high schools are adequately equipped with home economics, industrial, business education and technical labs. Business and industry demonstration stations are assured by the continuing endorsement the school district has from the Chamber of Commerce and the Manufacturers Association of Syracuse.

9. Special Funding Provisions:

Federal funds for this grant will be administered as a separate account by the school district finance officer and all disbursements will bear the project's identification number. If the project is successful, it is intended that its successful implementation will be the new educational system for the City School District.

I ORIENTATION LAP
List no. of errors

II CAREER LAPS
PRE/POST TEST ERRORS

III INSTRUCTIONAL METHODS

SCHOOL

TEACHER

CLASS LIST

NAME	Page 3	Page 4	Page 29	Page 30	Page 31				Telephone	Auto	Forestry	Secretary	Newspapermen	Post Office	Police/Fire	Construction	Nursing	Dentists	Restaurants	Schools		Interview	Int. Report	Group Res.	Ind. Res.	Scrap Book	Plan Fld. Trp.	Field Trip	Fld Trp Rpt	Panel Disc.			

GUIDED OCCUPATIONAL ORIENTATION

Standard Interview Sheet

1. What is your name? _____

2. What is your job title? _____

3. How much education did you have to have for your job? _____

_____

4. Did you have to take a test for your job? _____

5. What are some of your duties? _____

_____

6. Do you mind telling what the starting salary for your job is?

_____

7. What is the top salary your job pays? _____

8. Is the salary the same for everyone on this type of job? _____

9. Who or what decides when you get a raise? _____

_____

10. Why did you choose this job? _____

_____

11. What do you like best about your job? _____

_____

12. What do you like least about your job? _____

_____

13. What are your working hours? _____

14. What good habits should I develop now in elementary school that would help me to become a successful worker when I grow up? _____

_____

_____

15. Are there school subjects that I must do especially well in if I were to work in this kind of job? _____

_____

Beauty Care and Cosmetology

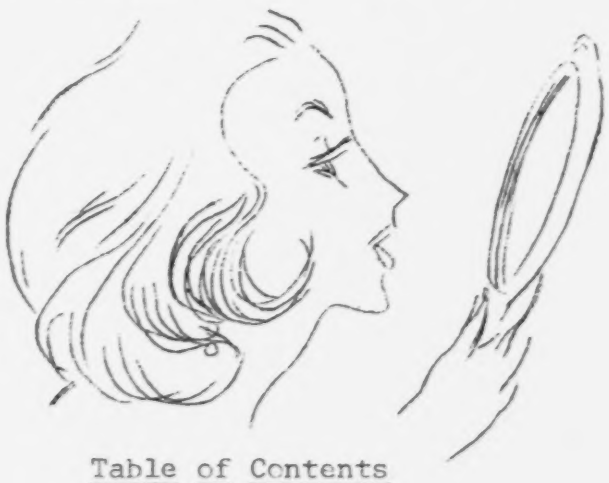
1306

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Did you know that hairdressing and related jobs hire 20,000 new people every year in the United States?

Have you ever thought you would like to work in a beauty salon (shop)?

To find out how to learn the trade - and how to succeed as a "beauty specialist".....read on!!



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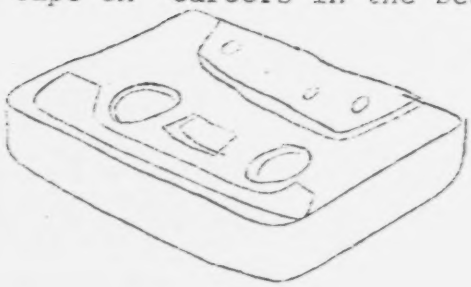
	Bibliographies	
	Interview Sheet	
	Glossary	

COSMETOLOGY

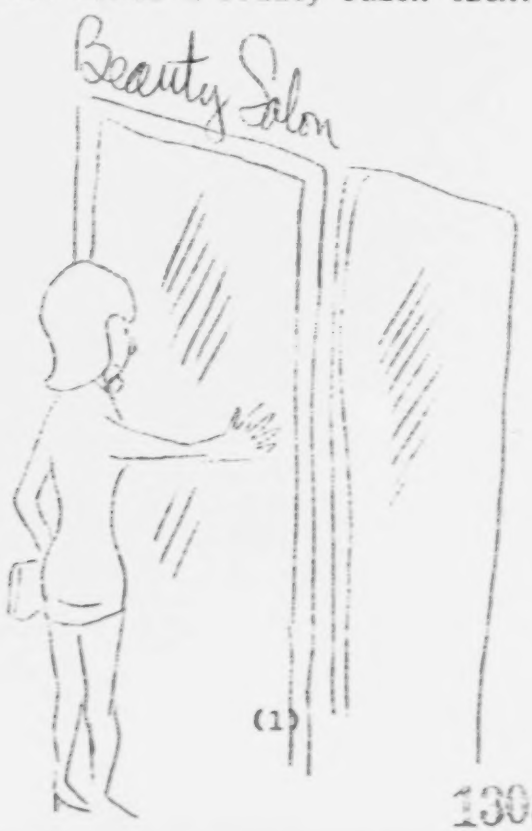
I. NATURE OF WORK
Learning Activity

1. Get the cassette tape on "Careers in the Beauty Industry".



Read the following story as you listen to the tape.

Have you ever been in a beauty salon or looked through the window of a beauty salon? Or, have you noticed women and girls walking by and have you thought that their hair looked real pretty? Do you know how many different kinds of jobs are needed to keep a beauty salon going so that those ladies can have nice-looking hair? Do you think you might like to work in the beauty industry? If you have, let's open the door and go in to see what makes a beauty salon tick.



COSMETOLOGY

I. NATURE OF WORK
Learning Activity

SECTION 1

When we first enter the beauty salon, probably the first person we will meet is the RECEPTIONIST (ree-sept-shun-ist). She will have a desk with a telephone so that she can make appointments for customers and be sure they are taken good care of by the right hairdresser and on time!

The RECEPTIONIST also collects the money from the customers and usually takes care of selling COSMETICS which can be seen on shelves in the salon. The RECEPTIONIST usually keeps track of the hours the employees work, the amount of money they have earned and, sometimes, even makes up the payroll. The RECEPTIONIST may, in fact, be the salon owner or manager or she may be an employee. It can be an important and well-paid job.

TURN OFF THE TAPE RECORDER WHILE YOU ANSWER THE FOLLOWING QUESTIONS:

Duties of a receptionist:

1. A receptionist makes _____ for customers.
2. She makes sure they are _____ _____ _____ of by the right hairdresser...and on time!
3. The receptionist also _____ the _____ from the customers and usually takes care of selling _____.

4209
1309

4. The receptionist usually keeps track of the _____ the employees work, the amount of _____ they have earned, and sometimes even make up the _____.

5. The receptionist may, in fact, be the _____ _____ or manager, or she may be an _____.

Pictionary ---- about the Beauty Business!

Shampooer - washes hair.

Hairstylist - cuts and styles hair.

Permanent Waver -puts curl in hair to stay in permanently.

Colorist - colors (dyes) hair.

Straightener - "presses" or takes curl out of hair.

(3a)

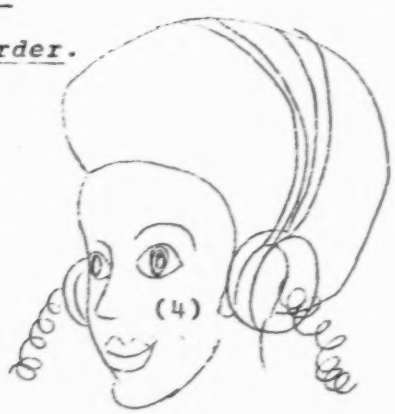
NOW: turn the tape back on and listen to it as you read more about our visit to the beauty salon.

SECTION 2

As we get farther back into the salon, we will see men and women working on customers' hair. In large shops these men and women may be specialists - they ordinarily do only the job that you see them doing. SHAMPOOERS, they wash and clean the hair for different reasons; apply rinses either for dandruff or for a different color; and generally assist the HAIRSTYLIST who cuts and arranges the hair to make a lady look her best. We also see the COLORIST. She has on rubber gloves and a plastic apron and she is applying a thick, dark cream on the hair to make it the color that the STYLIST wants. At another chair a PERMANENT WAVER is rolling up hair on short, different-colored plastic curlers and then applying a liquid to the curls. The liquid doesn't smell too good, but it makes the hair pretty.

In still another chair another hairdresser wearing rubber gloves and a plastic apron is putting heavy, white cream on the hair. She is the STRAIGHTENING specialist. When hair is too curly or kinky for a certain style, curl must be taken out of the hair. Sometimes the STRAIGHTENER will use a hot, brass comb to take out the curl. This is called PRESSING.

Turn off the tape recorder.



COSMETOLOGY

I. NATURE OF WORK
Learning Activity

Answer these questions from Section III

List two duties of a Shampooer

1. _____
2. _____

List one duty of a Hairstylist

1. _____

Complete the following sentences:

1. A Colorist wears _____ gloves and a _____ Apron. She applies thick, dark cream to the hair to change its _____.

List two steps a Permanent Waver goes through:

1. _____
   _____
2. _____
   _____

Complete the following sentences:

1. A Straightener puts heavy, white _____ on the hair.
2. Hair is straightened when it is too _____ or _____ for a certain style.
3. When a hot, brass comb is used to take out the curl, it is called _____.

(4a)

Pictionary ---- about more beauty salon workers!

Manicurist - cleans, shapes, and polishes fingernails

Dispensary Clerk - hands out supplies

Chief Stylist - either the owner or manager

NOW: turn the tape back on and listen to it as you read about these workers.

Section III

As we look over toward the dryers (dryers are hot-air hoods which fit over the customer's head to dry the hair - they look like space helmets), we see another person working on a customer's fingernails. She is called a MANICURIST and she clips and files fingernails, softens and grooms the customer's hands.

Back in the shop we discover a small room. It is well-lighted and ventilated. There is a sink and counter and lots of shelves, cabinets and containers all filled with bottles, cartons, linen and all sorts of things needed to work on customers and to keep the tools and containers clean. The person working in here is called a DISPENSARY CLERK.

We also have seen a man in a zipper jacket walking about the shop talking to different SPECIALISTS, looking at customer's hair and writing things on small cards. He is the OWNER or CHIEF STYLIST. What we have been looking at is a large shop with twenty or thirty people working in it. In a small shop (three or four people) the same type of things will be going on except there will be no specialists. The people working in a small shop perform all of these operations and are called ALL-AROUND OPERATORS.

Answer these questions from Section III

1. Dryers are _____ _____ hoods which fit over the customer's head to _____ the hair.
2. A manicurist _____ and files fingernails, _____ and _____ the customer's hands.
3. A _____ _____ handles and gives out bottles, linen and all other supplies used in the beauty salon.

COSMETOLOGY

I. NATURE OF WORK
Learning Activity

Get the Job Guide G-2, Manicurist.

Read the section on Job Duties. List six steps the manicurist goes through to "do" fingernails.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6. _____

_____

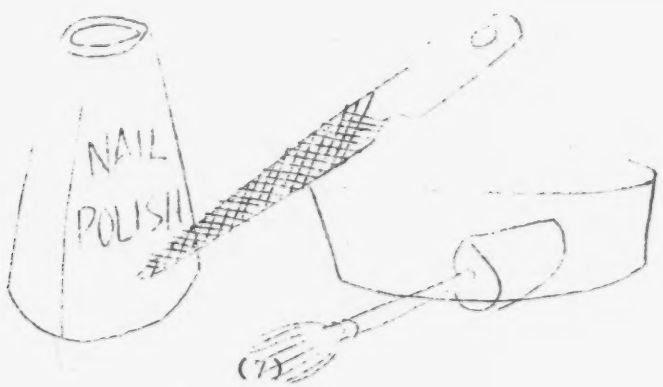
This job guide also states three things a manicurist MAY do.

They are:

1. _____

2. _____

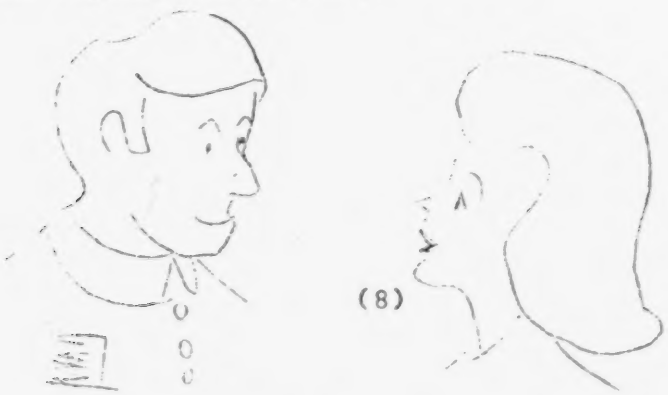
3. _____



How To Collect Information About The Hairdressing Profession

1. Get the name and address of any company that makes materials used in beauty shops. Use the list provided here or visit a beauty shop and tell the owner or manager that you want to be a hairdresser and ask if he can provide you with even more information.

2. How do you get to talk to a shop owner? Simple! First, find out the owner's name. The easiest way is to call on the telephone and ask. Just say, "May I have the name of the owner of your beauty shop?" (be sure that you have paper and pencil ready to write it down). Then say, "Thank you." During the first part of the week, stop into the shop and say, "Hello, my name is _____ and I would like to see Mr. _____." When the owner comes, just look him straight in the eye and tell him that you want to be a hairdresser and you would like advice on getting started. When you and he are through talking, thank him for his help. If it happens that he doesn't want to help, don't be discouraged. You can figure that you have met one of the very few unpleasant people in the beauty business. Call someone else (all jobs have some unpleasant people).



COSMETOLOGY

I. NATURE OF WORK
Enrichment

With a partner from your class, practice setting hair from the chart in the brown folder. Ask your teacher if you may plan a demonstration for your class.

1318

New York State Rules

To Become A Beauty Operator You Must Meet The Following Requirements:

1. You must be 17 years of age or older.
2. You must successfully have completed an approved course of study such as is offered at Syracuse Central Technical High school or as is offered in a private trade school.
3. You must be of good moral character.
4. You must be in good health.
5. You must have at least finished an elementary school education.

Get the Career Brief B-38, Cosmetologist. Open to the sections, "Personal Qualifications" and "Training Requirements". As you read it, listen to the side of the tape labeled "Personal Qualifications" and "Training Requirements".

When you have finished, go back and fill in the blanks of the following:

An aspirant should have an _____ and well-groomed _____, a pleasing _____, and a _____ manner.

She needs general _____ _____ and strong _____ and _____. The work requires dexterity of _____ and _____.

Every state requires the Beauty Operator to be _____. Most states require applicants to pass a _____ _____.

To take this examination, applicants must be at least _____ to _____ years old and complete an approved _____ course.

II. REQUIREMENTS
Learning Activity

The most desirable method of formal training includes completion of _____ _____ plus _____ to _____ months of formal training. A majority of beauty schools require applicants to have _____ _____ diplomas.

Some states will accept training in a public _____ _____ _____ leading to a vocational high school diploma as eligibility for taking the _____ _____ for a license.

The license is issued by New York State.

II. REQUIREMENTS
Learning Activity

All states reauire that Beauty Operators be licensed. To get a license, you must (1) first attend a beauty school or complete the course in Cosmetology at Central Tech High School. (2) You must be 17 years old or older. (3) You must have finished elementary school. (4) You must pass an examination.

Now fill in the four things necessary to obtain this license.

State Of New York

LICENSE FOR BEAUTY OPERATOR

(1) _____

_____

(2) _____

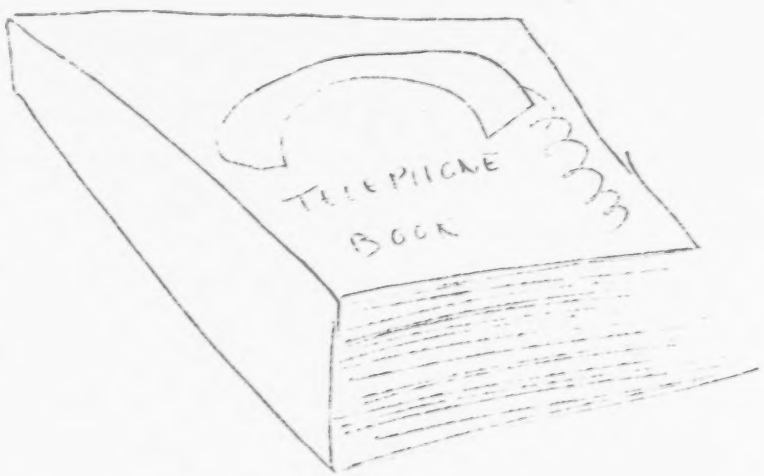
_____

(3) _____

_____

(4) _____

The yellow pages in the telephone book list the beauty schools in Syracuse. *List the names of the schools here:*



Ask your teacher to make arrangements with someone from the Cosmetology department of Central Tech to visit your class.

Beauty Operators...

Where AND HOW THEY WORK...

As you read the following paragraph, *underline* the words that tell why the work is hard; *circle* the words that tell why the work is pleasant.

Beauty operators work in clean comfortable shops. Salons are well lighted and pleasant. The work is not dangerous, but it is hard.

Beauty operators work long hours, often in the evening. They must work standing up, but the job is fascinating and interesting.

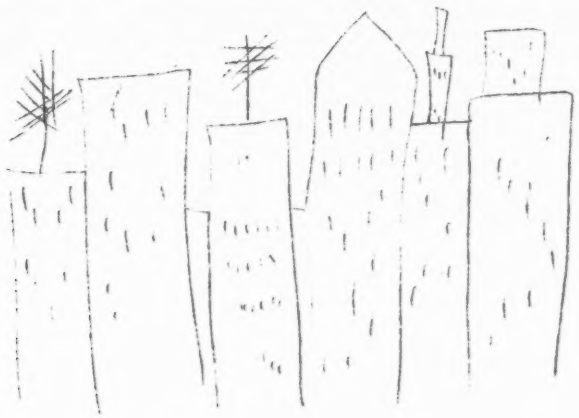
The hair dresser may be very rushed on weekends. He or she must please all kinds of people.

Now, list the underlined words in column I; list the circled words in column II.

Reasons Why -

I	II
Beauty work is hard:	Beauty work is pleasant:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Get the SRA brief, Beautician. On the last page, copy the section "Where Jobs Are Found".



In the section "Getting Started," find the places where jobs can be obtained. *List them here:*

1. _____
2. _____
3. _____
4. _____

Get the SRA Brief, Beauticians and the tape with the same title.

As you read the story, listen to the tape.

Get the DOT Cartoon, Beautician. Find the answers to fill the blanks below:

1. The pay is usually $_____ to $_____ per _____.
2. The hours are usually _____ to _____ a week.
3. _____ and _____ hours are usually included.
4. _____ - _____ work is also available.

Extras you may get:

1. Paid _____
2. _____ holidays
3. _____ and _____ insurance.

COSMETOLOGY

IV. ADVANTAGES
Learning Activity

Find the SRA Brief, Beautician, On the last page, in the section "Earnings", read to find the swers to these questions. Write in the missing parts.

1. The practice in most shops is to offer a flat guarnateed _____ _____ plus a _____ of the fees she takes in.
2. As an operator becomes _____, her wages increase.
3. The beginning wage in large shops is about $_____ to $_____ per week.
4. _____ add to the income.

Find the section "Future". Copy the sentence here: _____

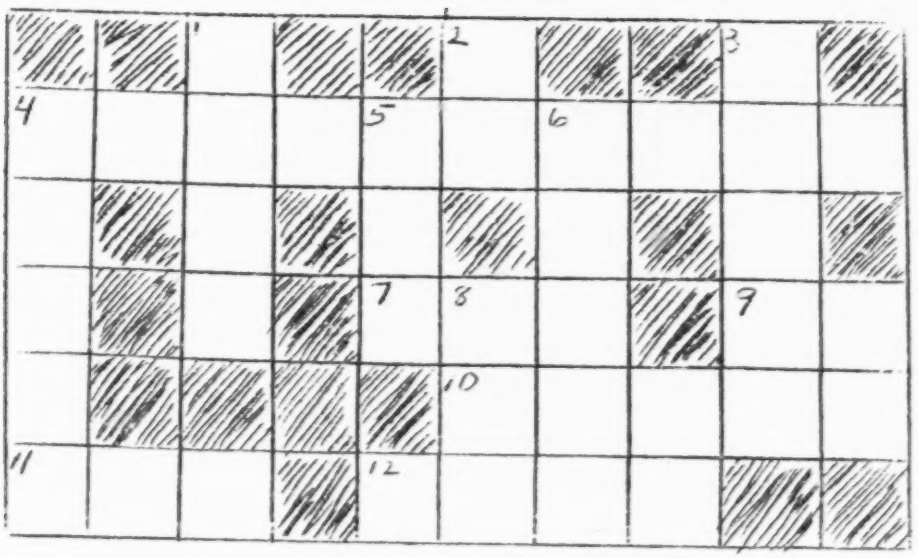
_____

_____

_____

1327

Enrichment

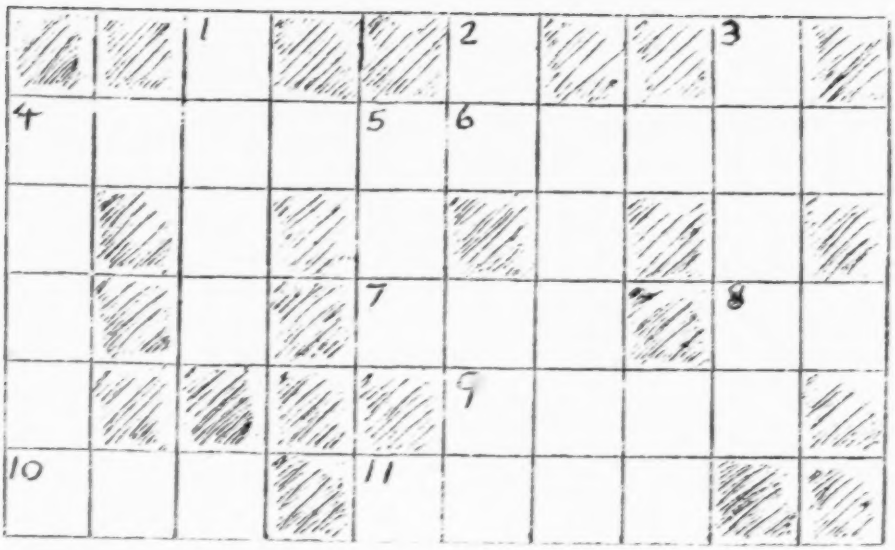


ACROSS

4. Someone who cuts, curls, and styles hair
7. Another word for friend
8. Opposite of "off"
9. Pop _____
10. The air from a hairdryer is _____
11. Short for "permanent"

DOWN

1. What a beauty operator cuts and curls
2. Short for hello
3. Another name for a beauty shop
4. A tool used to groom hair
5. Money given to a beautician over and above normal fee
6. A beautician uses a dye to change the _____of hair
8. High card



ACROSS

4. Someone who cuts curls and styles hair
7. Another word for friend
8. Opposite of "off"
9. Pop_____
10. The air from a hairdryer is _____.
11. Short for "permanent"

DOWN

1. What a beauty operator cuts and curls
2. Short for hello
3. Another name for a beauty shop
5. Money given to a beautician over and above normal fee
6. A beautician uses a dye to change the _____ of hair

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

COSMETOLOGY

Bibliography

SRA Brief

Beauticians

Career Brief

B-38 Cosmetologist

Career Summary

Manicurist

Job Guide

G-2 Manicurist

D.O.T. Cartoon

Cosmetologist, A Beauty Operator

State f New York, Dept. of State

Do You Plan to Be a Hairdresser?

Clairol

Careers in Beauty

Cassette Tapes

SRA - Beautician
Hairdresser (Career Center)

GUIDED OCCUPATIONAL ORIENTATION

Standard Interview Sheet

1. What is your name? _____

2. What is your job title? _____

3. How much education did you have to have for your job? _____

_____

4. Did you have to take a test for your job? _____

5. What are some of your duties? _____

_____

6. Do you mind telling what the starting salary for your job is?

_____

7. What is the top salary your job pays? _____

8. Is the salary the same for everyone on this type of job? _____

9. Who or what decides when you get a raise? _____

_____

10. Why did you choose this job? _____

_____

11. What do you like best about your job? _____

_____

12. What do you like least about your job? _____

_____

13. What are your working hours? _____

14. What good habits should I develop now in elementary school that would help me to become a successful worker when I grow up? _____

_____

_____

15. Are there school subjects that I must do especially well in if I were to work in this kind of job? _____

_____

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Glossary — Cosmetology

allergies - skin reactions to certain things; a person may have an "allergy" to creamy lotions, meaning they would cause their skin to break out or itch.

antiseptic - liquid or cream that helps kill germs and make things clean.

applicant - a person who applies for something, such as someone who is looking for a job.

aspirant - a person who hopes to reach a certain goal; someone who intends to become something in particular.

cosmetics - make-up; cream, powder, lipstick, etc.

cosmetology - the business of being a beauty operator.

customers - people who pay for services or buy things.

cuticles - hardened skin around the fingernails.

dexterity - being able to move quickly and easily.

emery board - a small, gentle nail file used to smooth edges of fingernails.

fascinating - holding the attention, interesting

hairdressing - the business of styling, cutting, curling and shampooing hair.

license - a certificate or paper issued to prove someone is qualified for some particular thing.

manicure - the care of the hands and nails.

manicurist - someone who is in the business of giving manicures

payroll - the list of people who work in any one place and the amount of money they are to receive in wages.

receptionist - person who greets you when you enter a place of business.

salon - another word for shop, such as "beauty salon"

specialist - a person who is highly trained to do some particular thing.

ventilated - to have fresh air circulate through a room.

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Cosmetology

Pre and Post Test

Choose the correct answer and write it in the blank.

1. A receptionist makes _____ for customers.

   shampoo hairstyles appointments

2. A colorist changes the color of the customers _____.

   hair skin fingernails

3. Pressing is done to _____.

   rubber gloves curly hair curly clothes

4. A manicurist grooms _____.

   hair fingernails scalp

5. To be a beauty operator you must be at least _____ years old.

   17 18 21

6. All beauty operators must have a _____.

   license high school diploma college diploma

7. A beauty operator's license comes from _____.

   New York State beauty school high school

8. One reason why a beautician's work is hard is that she must please _____.

   mainly her boss all kinds of people one customer at a time

9. The pay for a beautician is usually _____ a week.

   $60-70 $80-100 $100-120

10. _____ is usually available for beauticians.

    a uniform part-time work early retirement

NAME_____

STORE WORKERS
GUIDED OCCUPATIONAL ORIENTATION
SYRACUSE CITY SCHOOL DISTRICT
SKILL TRAINER PHASE

DURING YOUR STUDIES IN THE SKILL TRAINER VAN, YOU WILL BE ASKED TO DO MANY OF THE THINGS DONE BY STORE WORKERS.

A. OPERATE A GROCERY STORE TYPE CASH REGISTER.
   REMEMBER!! - SOME ITEMS ARE TAXABLE (TXBL ITEM) ENTER THESE ITEMS AS TXBL ITEMS WHEN YOU RING UP A SALE
   DO NOT FORGET TO USE THE TAXABLE TOTAL KEY. TURN TO PAGE 2 AND COMPLETE THE COMPARISON SHOPPERS WORKSHEET.

B. OPERATE AN ACCOUNTING MACHINE CASH REGISTER.
   TURN TO PAGE 3 AND COMPLETE THE HARDWARE STORE CLERK WORKSHEET. BE SURE TO MOVE TO THE OTHER (ACCOUNTING MACHINE) CASH REGISTER.

C. NOW IT IS TIME TO TAKE AN INVENTORY. TURN TO PAGE 4 AND TAKE A PHYSICAL INVENTORY OF THE SKILL TRAINER VAN. BE CAREFUL
   THE SKILL TEACHER WILL USE YOUR INVENTORY FOR REORDERING SUPPLIES FOR THE NEXT SCHOOL WE VISIT.

COMPARISON SHOPPERS

Work From The Grocery Lists Below.

1. If you were to buy all of your grocery items at the Hawkeye Food Store.

   How much would you spend? $ _____

   What would be your change from a $10 bill? _____

2. How much would you spend at the Spartan Grocery?$_____

   What would the change be from $6.00? _____

3. How much would the same items cost at the Wildcat Supermarket?

   If you had only $5.50 would you be able to shop at any of these markets? _____

4. If you had only $5.50, and went to all three stores to buy each item where it cost the least, (Example: Milk at Wildcat - Orange Juice at Hawkeye) would you have enough money? _____

   How much change would you have left? _____

Product	Hawkeye Food Store	Sparten Grocery	Wildcat Supermarket
Milk (gallon)	$1.05	$1.03	$0.99
Bread (loaf)	.27	.25	.23
Orange juice (can)	.20	.27	.23
Hamburger (pound)	.67	.73	.69
Fish (pound)	.63	.63	.69
Cereal (box)	.53	.47	.50
Apples (5 pounds)(TXBL item)	.69	.79	.75
Lettuce (head)	.27	.18	.25
Potatoes (5 pounds)	.69	.79	.69
Ice Cream (1/2 gallon)(TXBL item)	.59	.65	.79

ATTACH: ALL REGISTER TAPES TO THIS WORK STUDY.

Accounting Machine Cash Register

HARDWARE STORE OWNER

A customer comes into your hardware store and buys a hammer which costs $5.98. Ring up the sale.

He pays you with a $10.00 bill. What is his change _____

Did you remember to use the ONE ITEM CASH key?

Attach the correct register tape to this sheet.

The next customer, is not a customer at all. He wants change for the parking meter. He gives you a quarter and wants at least 2 nickles in change.

What would his change be? _____dimes _____nickles

Now take his change out of the cash drawer.

Which key did you ring up on? _____

Mr. Jones, a regular customer, is building some steps for his house. He has a big order.

10 lbs. nails	$ .59	
6-1/4 X 4 X 4 boards	.79	each
2 hammers	5.98	each
1 screwdriver	1.19	
2-2 X 4 X 8 studs	.79	each
1 pkg. #10 wood screws	1.39	
1 gal. - Grey paint	4.98	

Total up Mr. Jones bill _____

What is the tax _____

INVENTORY SHEET

Quantity	Description	Ped Serial Number
	Calculator(s)	1) _____
		2) _____
	Cash Register(s)	1) _____
		2) _____
		3) _____
	Typewriter(s)	1) _____
		2) _____
	Sewing Machines	1) _____
		2) _____
	Calculator Tapes	Size 22D
	Cash Register Tapes	Size 26Z
	Thread (in sewing machine drawer)	
	White	
	Black	
	Other Colors	
	Typewriter Ribbons on shelf	
Reams	Typewriter paper on shelf	

Pre-test_____ Post-test_____ Store Workers

Circle the letter in front of the correct answer

1. When a taxable item is entered on a cash register -

   a) the register tape prints in green ink

   b) the drawer locks

   c) the bell rings

2. If you make a mistake on a cash register -

   a) the cash drawer will not open

   b) it must be corrected immediately or the total will be wrong

   c) a small red light will flash

3. A motor bar on a cash register may be found -

   a) on top of the cash register

   b) with the rest of the keys

   c) connected by electrical wires to the transaction

4. If you were asked to check the stock by taking a physical inventory, you must -

   a) have to know how to use a stethescope

   b) know how to count

   c) know how to measure

NAME: _____

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Junior High

NAME _____ *TEACHER* _____

SCHOOL _____

Have you ever thought of what job you will have after you finish school?
Write down as many careers as you have thought of:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____

29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____
37. _____
38. _____
39. _____
40. _____
41. _____
42. _____
43. _____
44. _____
45. _____
46. _____
47. _____
48. _____
49. _____
50. _____
51. _____
52. _____
53. _____
54. _____
55. _____
56. _____

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Junior High Evaluation - Student

2A: Choose what you think is the best possible answer for each of the following multiple choice questions. Indicate your choice on your answer sheet by filling in the box under the letter you think is correct - a, b, c, or d.

(1.) To find a list of job openings in the Syracuse area, I would go to:
- (a) friends
- (b) a military recruiting office
- (c) teachers
- (d) the New York State Employment Service

(2.) If I wanted to be a carpenter, the best place to go for information would be:
- (a) newspaper want ads
- (b) labor unions
- (c) private employment agencies
- (d) the public library

(3.) To arrange my school schedule so that I might get into a vocational program I would go to:
- (a) my teachers
- (b) my parents
- (c) my guidance counselor
- (d) the Chamber of Commerce

(4.) If I were interested in jobs available in a grocery store chain, I would get the best information from:
- (a) my guidance counselor
- (b) a visit to a grocery store manager
- (c) the Public Library
- (d) Labor Union Organizations

(5.) If I wanted additional training in the computer field, my best source of information on training programs would be:
- (a) colleges and training schools
- (b) government agencies
- (c) advertisements
- (d) the Chamber of Commerce

(6.) If I wanted to know the number of policemen that would be needed in Syracuse in the next ten years, my best source of information would be
- (a) the Public Library
- (b) my teacher
- (c) the Chamber of Commerce
- (d) the New York State Employment Service

(7.) To really know what a machine operator does on the job, it is best to:
- (a) ask my friends
- (b) go to the New York State Employment Service
- (c) visit an industry
- (d) read a book dealing with machine operators

(8.) If I wanted to work for the government, my best source of information would be:
- (a) a training school
- (b) the Civil Service Commission
- (c) the Chamber of Commerce
- (d) advertisements

(9.) To find out the average earnings of a typist in Syracuse, the best source of information would be:
- (a) a friend who works as a typist
- (b) the Chamber of Commerce
- (c) advertisements
- (d) a private employment agency

(10.) If I wanted to learn how to write a personal resume' I would:
- (a) go to a labor union
- (b) ask my English teacher
- (c) ask my parents
- (d) go to a professional society

(11.) If I were working as a secretary and wanted to find a better job I would:
- (a) go to a private employment agency
- (b) talk to friends
- (c) talk to a labor union representative
- (d) ask a former business teacher

(12.) If I wanted to enter the field of airline mechanics, my best source of information would be to:
- (a) speak to an Air Force recruiter
- (b) ask a friend who is an auto mechanic
- (c) write to the Civil Service Commission
- (d) write to the Chamber of Commerce

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Junior High Evaluation - Student

2B: Look at each of the following sources which can be used for information about careers and jobs. On the answer sheet fill in the blank under a if you have used this source for job information; fill in the blank under b if you have not used it.

(13.) guidance counselors
(14.) teachers
(15.) relatives
(16.) friends
(17.) field trips
(18.) advertisements and want ads
(19.) Interview with employers
(20.) New York State Employment Agency
(21.) Private employment Agencies
(22.) Chamber of Commerce
(23.) Civil Service Commission
(24.) Labor Union organizations
(25.) Professional societies
(26.) Colleges and training schools
(27.) Governmental Agencies
(28.) School - Public library; books, pamphlets
(29.) Military Recruiting offices

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Junior High Evaluation - Student

3: Read the following questions and fill in the box on your answer sheet under the letter which best expresses the way you feel - a, b, c, d, or e.

Example: I think Richard Nixon is the president of the United States:

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

The correct answer would be: (a) strongly agree

(30.) It is just as important to plan for your future job as it is to plan what subjects you will need to graduate from high school.

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(31.) It is not necessary to think about a career until you finish high school or college.

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(32.) What I learn in science classes has little to do with the kind of job I might choose someday.

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(33.) The type of jobs available in the Syracuse area has little to do with the kind of work you will do someday.

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(34.) How much schooling a person has means little as to what jobs he can hope to get.

(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(35.) The school counselor will have very little to do with your future career choice.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(36.) Knowing something about many different kinds of jobs is important before making a definite career choice.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(37.) Finding out about how my school subjects might help me in different jobs is useful in planning for a career.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(38.) Planning for a job involves only learning about what you like to do.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(39.) In planning for a job, the only thing to consider is your ability to do a particular job.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(40.) What I learn in English has little to do with the kind of job I might choose someday.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(41.) In planning for a job, it is important to think about whether a job involves working indoors or outdoors.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(42.) A student can plan out his career by himself just as well as if he gets help and advice from others.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(43.) What I learn in Math has little to do with the kind of job I might choose someday.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(44.) Many people change their minds about their careers after they have started working. Therefore it is un-important to plan for your career.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(45.) The more time I put into studying about possible careers, the more likely it will be for me to find a job that is best suited to me.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(46.) A student should wait until he or she is a senior in high school and see what jobs are available before making plans for a career.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(47.) It is important to start thinking and planning for a job while still in junior high school.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

(48.) What I learn in social studies has little to do with the kind of job I might choose someday.
(a) strongly agree
(b) agree
(c) not sure
(d) disagree
(e) strongly disagree

TELEPHONE CAREERS

Rationale -

Do you like to talk with someone?
Do you like to listen?
Can you learn how others think and feel?
The best way for us to talk is face-to-face. This is "Communication."
Can you think of another way to talk to someone?
As you study this LAP you will find another interesting way to communicate.
Listen to the record "Telephone Repairman" for some ideas.

Pre-Evaluation -

Can you name five ways of communicating with others?
Try to name five workers who help you to communicate with others.
Can you name an instrument that helps you to communicate.

Behavioral Objectives -

Here are some things you will be able to do when you finish working on this LAP.

I. - A. Given a choice of occupations you should be able to circle those that come under telephone workers.

B. Given pictures of telephone employees you should be able to label their occupations.

II. - A. Given a list of occupations and a list of salaries, you should be able to match the salaries with the occupations by drawing a bar graph.

B. Given a list of employees and a chart containing the differemt jevels of schooling, you should be able to put each worker under the correct heading.

C. Given a choice of characteristics, you should be able to recognize those that apply to telephone employees.

III. -A. Given several words describing working conditions, you should be able to explain how each fits the telephone industry.

B. You should be able to tell under what conditions telephone workers must work overtime.

IV. -A. Using a telephone book you should be able to locate definite information in the yellow pages.

B. Given a list of names, you should be able to place them in the order in which they appear tin the telephone book.

V. -A. You should be able to complete a Job Information Form.

B. Given the words, "fringe benefits," you should be able to list the ones given by a telephone company.

C. Given a list of workers, you should be able to circle those who earn the most money per week.

VI. -A. You should be able to explain what future there is in working for a telephone company.

TELEPHONE CAREERS

I. Nature of Work

A. Here is a list of telephone workers. Look in your dictionary for the meanings of any words you don't know. Write sentences using your own words. Explain what each word means.

telephone craftsman _____

telephone operator _____

clerical worker _____

administrative personnel _____

sales personnel _____

scientific and technical personnel _____

_____

maintenance and building service personnel _____

_____

B. Read the following want-ads. Under each one writ the career name of the worker wanted.

Wanted: girl with pleasant speaking voice, enjoys working with people.	Man over 18 with mechanical skill - ability to climb
_____	_____
Wanted - girl with business training - abie to take shorthand.	Man with mechanical skill willing to travel - gets along well with people
_____	_____

II. Requirements

A. Go to the Semi-Skilled Career Kit and find these cards:

"Telephone Installer"

"Telephone Cable Splicers"

"Telephone Operator"

II. Requirements - continued

Fill in the chart below with information from these cards.

PERSON	EDUCATION	TRAINING

B. Read the directions and complete the exercise called WHAT WOULD YOU DO?

If you were being trained for a job and found yourself in any of the situations below, what would you do? Put a check mark (x) beside the answer you think is BEST. And in the empty spaces, write an answer of your own.

1. You find it impossible to get along with the person who is training you.

_____a. Complain about him to his superior.

_____b. Try to get along with him as best you can.

_____c. Leave the job and try to find another one.

d _____

_____

2. You find it difficult to understand some of the classroom instruction you are receiving.

_____a. Tell the instructor that you're having difficulty understanding.

_____b. Ask another trainee to help you understand the information.

_____c. Drop out of the training program.

d. _____

_____

II. Requirements - continued

B. 3. The training is going well, but you don't think you're being paid enough money.

_____a. Ask the person who hired you if there's any possibility of getting a raise.

_____b. Quit the training program and try to find another job.

_____c. Tell the person who's training you that you can't live on the money you are earning.

_____d. _____

_____

4. You have a legitimate gripe about the way a training program is being conducted.

_____a. Take your gripe to the president of the company you are working for.

_____b. Take your gripe to the head of the training program.

_____c. Explain your gripe to the other people who are being trained with you and find out if they agree with you.

_____d. _____

_____

5. You're being annoyed and harassed by someone else who's being trained with you.

_____a. Stay away from him as much as possible.

_____b. Try to become friendly with him.

_____c. Report him to the person who is training you.

_____d. _____

_____

6. You discover that you don't like the job you're being trained for, and would like to be trained for another kind of job with the same company.

_____a. Go immediately to the person who hired you and present him with your problem.

_____b. Ask the person who's training you for advice about the problem.

_____c. Speak to another trainee about your problem and ask hom for his advice.

_____d. _____

III. Conditions and Location of Work

A. From the conditions named circle those that best describe telephone linemen and installers. Use your dictionary to look up any words you don't understand.

indoors	steady	climbing
outdoors	seasonal	tiring
noisy	dangerous	heavy lifting
quiet	standing	odd hours

B. Underline the right answer.

1. I am a boy who likes the outdoors. I like to climb trees. I am interested in electricity. Which career might I be interested in?

salesman		truck driver
lineman	telephone lineman	life guard

2. After a storm I am called out to work many hours in the bad weather. I must wear a hard hat, rubber gloves, and special shoes. Who am I?

brick layer		cable splicer
football player	miner	riveter

3. I have a pleasant voice and good hearing. I enjoy talking to people. I work regular hours, either day or night. Who am I?

beautician		nurse
telephone operator	teacher	secretary

C. Pretend you are a lineman called out on a stormy night. Write a short paragraph describing your experiences.

_____

_____

_____

_____

IV. Duties

A. Do you know there are yellow pages in the telephone book? After reading this story and answering the questions you will better understand the use of the yellow pages.

Read USING THE YELLOW PAGES on the next page.

III. *Using the yellow pages.* Pat handed her brother Tom the phone book. "What's this for?" he asked.

"Help me," said Pat. "Mother said I could have my hair done. I want to go to that place my friend Betty goes to. I want to phone and see when they can take me. But I can't find the place in the phone book. I know it's at 311 Park Avenue and that the name begins with *J*. But look—there are pages and pages of *J*'s. It will take me forever to find the phone number."

"Why don't you use the yellow pages?" asked Tom.

"Yellow pages? Oh yes, I see the yellow pages. But how will they help me?"

"The yellow pages have all the stores and places where you want work done. The names are not in ABC order at first, but what you want is in ABC order—automobiles, boats, cleaners, and so on. Then under those things are the names of the people you can call. Their names are in ABC order. Look — under 'Books,' Brown's Book Store comes before Carter's Book Store because *B* comes before *C*."

"I guess I should look under 'Beauty Shop,' " said Pat. "How do you spell it? I know it begins with *B*."

"Well, that's a help," said Tom. "But you won't always have me around to spell for you. Turn to the *B*'s and try to find a picture of someone having her hair done."

"Oh, here's one," Pat said. "And here's another one." She went on looking.

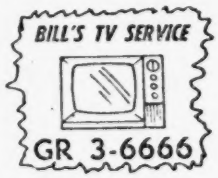
"Then you've found 'Beauty Shops.' Look under the *J*'s until you find the address you want."

"That's easy," said Pat. "Here it is. Jack's Place, 311 Park Avenue, HO 7-9155.' I can see that using the yellow pages saves time."

A. Here are pictures of parts of the yellow pages in the phone book. Look at them carefully. Then answer the questions on the next page.

RESTAURANTS

Art's Hot Dog Stand	21 State St.	CO 6-5943
As You Like It	42 Carter St.	BE 3-1049
Blue Bird Inn	100 Lake Rd.	CH 4-0832
Brown's Restaurant	2 Kansas St.	CO 6-5543
Earl's Place	3567 Garden St.	CL 4-5862
Leo's Steak House	44 Buffalo Rd.	FI 5-5535
Mallory Chop House	234 Bly St.	CH 4-3921



TRUCKING

Carter's Carting	34 Carter St.	LO 2-3278
Lynn's Lines	32 Win St.	BU 8-5555
Matt's Lines	999 Ace Ave.	ID 6-4321
Tom's Trucking Co.	445 River Rd.	DU 1-3254
Tot's Carting	23 Kansas St.	CO 6-8844

BEAUTY SHOPS

Arno House	2 Main St.	GL 8-2111
Chez Char	31 State St.	HU 2-0792
Clare's Salon	33 A St.	NO 3-4343
Henri's	23 State St.	ID 6-4444
K & V's	448 Main St.	GL 8-1010

ANSWER THE FOLLOWING QUESTIONS -------

1. Tom wants to take Mary out to a restaurant they haven't been to. He looks in the yellow pages. What does he look under? _____
2. Pete's family is going to move. They need a truck. What do they look under in the yellow pages? _____
3. Pat heard about a beauty shop called K & V's. She doesn't know what street it is on. Find out for her. _____
4. The stock boys are having a party. Tom wants to order some hot dogs for the party from a place at 21 State Street. Find the name of the place for him.

   _____
5. One of Pat's young brothers was hurt, and she had to call for help. She got the right place, because she looked for the picture that would help her. Then she learned the word she should have looked under. What is that word? _____
6. If your TV broke down, what is one place you could call? _____
7. Mrs. Crandall wants to have the house painted. Whom could she call to do the painting?

   _____
8. Why does "Restaurants" come before "Trucking" in the yellow pages?

   _____
9. Look under "Beauty Shops." Why does "Chez Char" come after "Arno House"?

   _____
10. Which comes first under "Trucking" – "Tom's Trucking" or "Carter's Carting"?

    _____
11. Could you answer 8 without looking back at the yellow pages? _____
12. Should you answer 8 without looking back at the yellow pages? _____
13. Tell why you answered 10 as you did. _____

B. Look again at the pictures of the parts from the yellow pages. Write the phone numbers that these people should call.

1. Mr. Cleary wants to have a fence put around his back yard. _____
2. Mr. Benson wants to call Matt's Lines. _____
3. Gloria wants to have her hair done at Chez Char. _____
4. Pete wants to get seat covers for his new car. _____
5. The Crandall's TV broke down. _____
6. Tom wanted to be sure the Blue Bird Inn would have room for him when he took Mary there for dinner on Sunday. _____
7. What number did Tom call when he wanted the hot dogs for the party? _____
8. Mary wanted to call the beauty shop that was next door to Art's Hot Dog Stand.

   _____
9. Mr. Clark wanted to call a trucking company near the As You Like It Restaurant. _____

V. Advantages

A. One of the important things in taking a job is the amount of money you will earn. After working with these salaries, you may decide you would like to become a telephone employee when you have finished school.

1. In the telephone industry the average beginning weekly earnings for a telephone operator is $70 a week.

   How much will she earn a month?_____

   What will her salary be in one year?_____

2. If the beginning salary of a telephone installer is $85. a week, what is this per day for a 5-day week?

   _____

3. A cable splicer earns as much as $170.50 a week. A telephone installer earns about $136.00 a week.

   What is the difference in their weekly wages?_____

   How much would this be in a month?_____

4. If the salaries of telephone workers are $154.50, $117.50, $136.00, $95.00 and $70.00, what is the average salary?

B. 1. What do you suppose "fringe benefits" means? Look in the dictionary to find out. Write why this would be one advantage in working for the telephone company.

_____

_____

_____

2. Look at reference materials about telephone employees to find another advantage.

_____

VI. Future of Job

A. From the chart below, discover whether these people were steady workers. Follow all the directions on the chart.

A. In Column 1 are the names of some workers and the dates they started to work. In Column 2, write the names of the workers in the order of their job seniority. Start with the worker who has the most job seniority.

Column 1		Column 2	
Name of Worker	Date Started	Name of Worker	Date Started
1. Mike Franco	12/12/55	1. _____	_____
2. Ann Samuels	2/1/61	2. _____	_____
3. Della Green	9/4/63	3. _____	_____
4. Ed Better	12/1/55	4. _____	_____
5. Russ Bray	2/26/61	5. _____	_____
6. Joe Spino	2/15/62	6. _____	_____
7. Alan Gold	9/6/56	7. _____	_____
8. Daisy Jordan	11/6/55	8. _____	_____
9. Arnie Swift	7/10/63	9. _____	_____
10. Wanda Breen	1/22/59	10. _____	_____

B. Read each statement. If the statement is true, write "True" on the line. If it is not true, write "False" on the line.

1. Joe Spino has more seniority than Arnie Swift. _____
2. Wanda Breen has less seniority than Alan Gold. _____
3. Ed Better has more seniority than Mike Franco. _____
4. Russ Bray has less seniority than Ann Samuels. _____
5. Della Green has more seniority than Arnie Swift. _____

B. From all the information you have found doing this LAP, prepare a short talk on one telephone employee. Present it to the class during English period.

C. Write a letter to the telephone company asking for the latest materials on careers in their industry.

_____

_____

_____

_____

TELEPHONE CAREERS

Post-Evaluation

I. Match the duty listed below with the correct title.
Place the number of the title in the blank space before the duty.

1. telephone operator	_____ has charge of telephone operators
2. service representative	_____ one who puts in a telephone
3. telephone installer	_____ person you dial for help
4. telephone lineman	_____ person who works with cables
5. cable splicer	_____ person who repairs damaged lines
6. supervisor	_____person who works in sales

II. Which of the workers listed above earn the most money?_____

III. Which of the workers work outdoors?_____

_____

IV. Which of the workers may be either men or women? _____

_____

V. Which of the workers has to have the most schooling?

_____

VI. Which of the workers would work overtime most often?_____

_____

TELEPHONE CAREERS

Bibliography

Books -

Greene, Carla — "I Want to be a Telephone Operator" Children's Press, Inc. 1958

LaRue — "Voices and Tools and Machines" Century 1969

Miner, O. Irene Sevrey — "The True Book of Communication" Children's Press 1960

Records

Gordon Lisk — Telephone Repairman #18170 McGraw Hill Book Company

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

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GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

TEACHER'S MANUAL

Individualized Career Studies

The basis of the Individualized Career Studies is self-direction by the students. This is accomplished by two means:

(1) Instructional Level: Blue - below grade level
Yellow - Average
Pink - above grade level

All three levels contain learning activities to meet the same objectives as spelled out in the pre-post tests; these learning activities are tailored to meet the needs of the learner at each of the three instructional levels. The "ability" at each of these levels was determined by the teacher-author of the study and a reading specialist. The teacher prescribes the correct level (by color) for each child in her class.

Orientation Study (Introduction to the World of Work) - although the teacher prescribes the instructional level, you will notice that many pages are white. It is advised that these white pages be done as a whole group activity - mainly because of the newness of the material and the need ot share ideas. As the study p-ogresses, the number of colored sheets of independent work increases. If this is the childs first experience in self-direction, it is THE TIME to emphasize the importance of reading directions and following them on his own. It becomes increasingly important for him to be self-reliant as he goes into the Career Studies. Emphasize that students become familiar with the glossary and use it frequently.

(2) Choice of Interest Areas: This choice is made by the student. He should choose three areas* in which he is interested.

ICS's - Twenty-one careers are written up as studies, each one done in three ability levels. An overview of the content of each has been written by the author of each and is included in this manual. Please read each thoroughly to help guide the students in their selection of career studies. The writing team has also included a section on ideas to assist you in implementing each study in your classroom. Prerequisite skills, needed by the students (letter writing, outlining, etc.) , are noted in this section.

* The number of ICS's done by the child is left to the discretion of the teacher. If possible, three is the recommended number.

The following features are standard in each ICS:

1 - General Format - each study has four sections:

a. Nature of Work - description of jobs in this family, duties, (this section usually is the largest).
b. Requirements - a study of the physical and educational requirements of the main jobs in this area.
c. Conditions - treats working conditions, location of job, etc.
d. Advantages - describes earnings and, in some cases, the future of these jobs. In many studies this section utilizes math.

2 - Learning Activities and Enrichment - each of the above four sections contains both:

a. learning activities - fundamental to successful completion of the ICS. All students using the study should complete all learning activities.
b. enrichment - contains activities related to jobs but not essential instruction. Enrichment activities give the opportunity for the teacher to further individualized instruction by assigning those activities which will best suit each child's style of learning.

3 - Pre-post Test - Items are identical for pre and post tests. They are based directly upon a learning activity, which is indicated in the teachers manual. Each test item is one in which student makes a choice from a given set of answers and then writes that choice in the blank. There is only one correct answer for each blank. In each study the content "spread" of the test items is:

a. Nature of Work - 4 questions
b. Requirements - 2 questions
c. Conditions - 2 questions
d. Advantages - 2 questions

Use the answer key for marking. Only the teacher should mark pre and post tests. Each correct answer counts 1 point. Ten points is a perfect score. Enter the pre and post test scores in the space provided on the progress sheet. Pre and post tests are packaged separate from the Career Study and should be kept by the teacher except when being administered. Please refer to "Suggestions for Administering Pre and Post Tests", located with the tests.

4. Table of Contents page: The paragraph on this page is actually a rationale for the students. They should read this carefully and use it to help them determine their choice of areas to study.

5. Bibliography: Before starting and during the use of the career study, the student should become completely familiar with the use of the bibliography. Because he will be independently getting his own resource materials, he must be able to determine what they are.* The bibliographies list the following materials - all of which are in the Career Study Kit (in classroom),

   a. Books - mainly hard cover books, listed in standard from.

   Material in Brown Folders

   b. SRA Briefs - large folders found in the brown duo-tang folders. These contain stories related to each career, and each one has an accompanying cassette tape. This tape is to be listened to as the child reads the story. The back page contains pertinent facts used in learning activities.
   c. Career Briefs
      Career Summaries
      Job Guides
   d. Green D.O.T. Cards - Dictionary of Occupational Titles published by Sextant and Company. Kept in brown folders according to careers.
   e. D.O.T. Cartoons - leaflets published
   f. U.S. Government Occupational Outlook Bulletins
   g. Reprints

   A V Material

   i. Cassette Tapes
   j. Filmstrips

   All of these resource materials should be explained to the class before they begin their independent work. Allow them time to look them over and ask questions.

   It is essential that a careful inventory be made of all materials when received and again before they are returned. Notify the Career Center of any missing materials immediately.

*Stress to the children that these books are necessary for them to proceed with the activities assigned to them in the Career Studies.

6. Progress Sheets - one per child per career study, are the permanent record to be returned to the Career Center. They serve the two-fold purpose of

   a- a guide to the ICS activities - the prescription sheet, and
   b- the only record keeping teacher is asked to do, to be returned to the Career Center for evaluation. These constitute essential data needed for the evaluation requested by the Federal Government.

Use of the progress sheets - before student does any part of a career study, he should complete the pre-test. Please refer to "Suggestions for Administering Pre and Post Tests," located with the tests. Results of this pre-test should be recorded in the space provided on the Progress Sheet. The Pre and Post tests themselves should be marked by the teacher and kept in her possession at all times. Activities are listed according to the four sections of each ICS; within each section is a description of each activity and the page on which it is located. Teachers can use this to assign work to be done on a certain day or for a series of days. There is another column, marked "done", in which to indicate if work is satisfactory and/or a grade. Students use these sheets to locate and keep track of work assigned. Teachers also can use this as a guide for AV required, or out of room activities such as field trips or interviews.

"Assign" and "Done" Columns

The activities assigned must be so indicated by the teacher in the column marked "Assign." The Career Center will depend on you to indicate (by a checkmark or a date) in these columns any activities engaged in by students. Each of these will be recorded by the Career Center for the program evaluation. Please be sure to indicate, by marking in these columns, which activities were done by each child.

7. Glossary - mainly job-related words unique to each career. Students should be encouraged to study this carefully before beginning the career study and to refer to it constantly during the learning activities. Teacher may want to design additional activities using the glossary.

8. Interview Sheet - attached to the back of each career study. The main purpose of the study is to gain information, and the interview technique is a valuable method. All students should make use of this method, practice it in the classroom and be prepared to use it on field trips or with resource people. Please refer to the interview lesson in the Orientation Study Appendix.

Other Items:

Career Ladders
Charts, graphs
Field Trips

Other items, not necessarily in each study.

Career Ladders: These are graph like devices used to illustrate the job-family concept. Each study, whether it be about construction workers or school personnel, presents the family of workers involved, from unskilled up through the professional level. The career ladder relates these jobs in terms of education and income.

Field Trips: You will be advised by additional bulletins as to the standard field trip procedure. Again - the main purpose of the program is to get information about jobs, not products. The field trips should be planned and carried out to meet this objective. Children should be prepared by (a) knowing what information they are to seek, (b) know what method they are to use in acquiring this information, (c) having practiced these methods before the trip, and (d) knowing how they are to use this information when the trip is over. Further detail on these points:

a- information children are to seek - falls into the same four objectives that are the framework of the Career Studies, namely: nature of work and duties of the jobs observed, educational and physical requirements for these jobs, conditions and location of these jobs, advantages and future of these jobs. The standard interview sheet contains questions relating to these objectives. Students should be encouraged to expand upon these standard questions.

b- methods - interview (by whom? how many students at a time?); observation (checklists of facts needed should be prepared).

c- practice- before a field trip in which interviews are to be done, small groups should be organized with specific areas to be covered assigned to each group. Each group should have a spokesman (asks questions), a recorder (writes answers), timekeeper (responsible for moving the group on).

d- use of information - to share with the class, interview groups should be scheduled to report their findings orally, upon return from the trip. All those doing that particular career study should be aware that this is their opportunity to obtain any information they need.

Charts and Graphs

Presenting Data - A graph is a visual representation of data that often facilitates understanding the data. The most frequently used graphs are the pictograph, the bar graph, the circle graph, and the line graph.

A bar graph usually can be read with a greater degree of precision than can a pictograph. The students should be provided with opportunities to draw both vertical and horizontal bar graphs. The terms horizontal axis and vertical axis also prepare the students for later work in graphing.

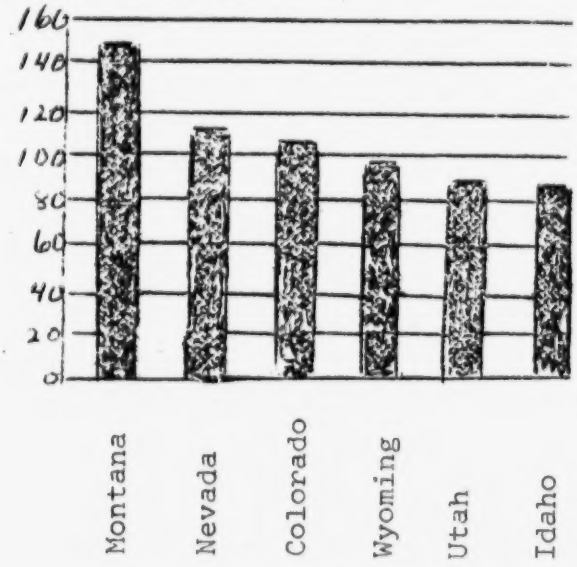
A. Presenting Data in a Bar Graph

Terms

1. *Bar Graph*
2. *Vertical Bar Graph*
3. *Horizontal Axis*
4. *Vertical Axis*

Usually, the vertical scale of a graph begins at zero and extends upwards in intervals appropriate to the data being presented. This fact will be familiar to students from their work in earlier grade levels. (Sample lessons #1-9)

B. #1. Data can often be presented by a graph called a bar graph. The graph at the right is a vertical bar graph showing the areas of the Mountain States. Why do you think it is called a "vertical" bar graph?



#2. The states are listed on a horizontal line, which is called the horizontal axis of the graph. The vertical line at the left of the graph is called the vertical axis. The numerals along the vertical axi are in the form of a scale, called the vertical scale. How many thousands of square miles are represented by each of the spaces between lines on the vertical scale? (10)
By comparing the height of the bar and the vertical scale, make an estimate of the area of each of the Mountain States

Charts and Graphs (cont'd)

3. The areas, to the nearest 1,000 square miles, are shown in the table at the right. Draw a vertical bar graph in which each space on scale represents 5,000 square miles.

State	Area in Sq. Miles
Montana	147,000
Nevada	111,000
Colorado	104,000
Wyoming	99,000
Utah	85,000
Idaho	84,000

4. Do the bar graph you drew and the one shown above present the same information? (yes)

5. Which presentation, the table or the bar graph enables you to compare the areas of any two states quickly and easily? (bar graph)

C. *In exercise 4, you may wish to ask students which graph is more accurate: the one they drew for 3 or the one presented on the preceding page. (The students' graphs should present each area to the nearest 5,000 sq. mi.; the text graph presents each area to the nearest 10,000 sq. mi.)*

6. The bars for the graph on the preceding page were drawn vertically . The bars of a bar graph can also be drawn horizontally. The scale will then be on the horizontal axis. Such a graph is called a Horizontal Bar Graph.

7. The table at the right shows, for eleven kinds of food, the number of calories contained in one cup. What is the greatest number of calories that must be represented on the scale of a bar graph made from these data? (165) How many spaces will be required to represent that number of calories, if you let each space represent 5 calories? (16½) 10 calories? (33)

Food	Calories
Milk	165
Spaghetti	155
Lima beans	150
Orange juice	110
Buttermilk	90
Beets	70
Popcorn	55
Spinach	45
Carrots	45
Turnips	40
Cabbage	25

Charts and Graphs (cont'd)

The choice of a horizontal or a vertical bar graph for presenting data is arbitrary. However, certain types of data lend themselves better to one type of graph than to the other. For example, the vertical bar graph is more appropriate for persenting altitudes and the horizontal bar graph is more appropriate for presenting distances.

8. Select a value for each space, and make a vertical bar graph of the data.

9. Astronomers measure the distance from the earth to the various stars in units of light-years. One light-year is equivalent to the distance light travels in one year, or about 5,880,000,000,000 miles. Listed below are 16 stars and their distances from the earth in light years. Make a horizontal bar graph of these data.

DISTANCE OF STARS FROM THE EARTH

Stars	Light Years	Stars	Light Years
Sirius	9	Betelguese	300
Canopus	90	Aldebaran	55
Alpha Centauri	4	Spica	190
Vega	27	Pollux	30
Arcturus	32	Antares	170
Capella	42	Fomalhaut	27
Procyon	11	Regulus	70
Altair	18	Castor	45

Classroom Management: There is no set formula for this. As with other phases of implementing this program, decisions are left to the individual teacher's judgement. How you set up and run the career studies will depend on you, your particular class, the amount of experience that both you and your students have had in self-directed study. The teacher during this program should assume the role of a director of activities. This will be easi to accomplish when:

a- teacher and students are thoroughly familiar with objectives, content and procedure for the career studies,

b- teacher prescribes correct instructional level for independent student progress and further refines the prescription by careful choice of enrichment activities.

c- student choice of career studies is based on familiarity with their content,

d- students are ready to assume responsibility for their own progress. This can be determined only by the teacher. Students should be impressed with the fact that other than the pre-post tests and purely subjective answers, they themselves will be responsible for checking their answers with the answer key, correcting their errors, and moving ahead upon satisfactory completion of each activity. It will be their responsibility to read instructions, locate their resource materials, complete their tasks, score them and then proceed all at their own rate;

e- teacher should periodically (perhaps twice a week) review all Progress Sheets to see what AV materials are required for what students. Scheduling of recorders and previewers could well be very complicated. It is wise to have a list of other activities ready to take up the slack time a child will have waiting for the use of AV equipment. Such activities could be from the Enrichment section, or general classroom routines such as spelling assignments,peer tutoring and designing of new activities by the students themselves. The important thing is that these "busy work" suggestions be ready ahead of time.

f- students should be assigned responsibility for daily inventories of all resource material. There should be a "chairman" appointed for each of the following:

a. books
b. brown folder
c. tapes
d. recorders, headsets and previewers
e. filmstrips
f. answer keys

These materials should be inventoried by each chairman each day. Loss of any materials should be reported immediately to the Career Center.

Red Duo-tang folders: provided for each student. These are to be used for his career studies and progress sheet. At no time should the progress sheets be allowed to be stored loose in the desk as they are the permanent record for evaluation data and must be returned to the Career Center.

CAREER CENTER VISIT MEMO

Where: Career Center, Room 11, George Washington School, 1970 Meadowbrook Drive.

When: On two consecutive days of the block of days to your school; 9:30 - 11:30 A.M.

How: Transportation has been arranged for you and your class. The District bus will be at your school no later than 9:30 A.M. on each day assigned. You will be returned to your school by 11:30 A.M.

Why: The visit to the Center should provide each student with a realistic and personal approach to his in-depth study of the world of work. Thirty-five industrial and business concerns have cooperated in furnishing exhibits that are representative of job areas in our community. They are clever, unusual, and thought provoking. They represent a large investment by these companies in time, effort and supplies. The trip will provide the springboard for a worthwhile study of the world of work.

Impress upon your class that this is a privilege extended by school and the businessmen of the community. Concerns such as Community-Hospital, the Telephone Co., WSYR-TV, etc., have cooperated with us to furnish the Center; we in the school system must cooperate by showing our best manners.

PRE-PLANNING FOR ENTIRE PROGRAM

1. Obtain old magazines for pupils to use in collecting pictures of people at work. Other faculty members and friends can help you.

2. Prepare a resource file folder for each Career Study and begin collecting pictures, posters, etc. for display use.

3. Request supplementary films and filmstrips from film library if desired.

4. Prepare bulletin board showing workers.

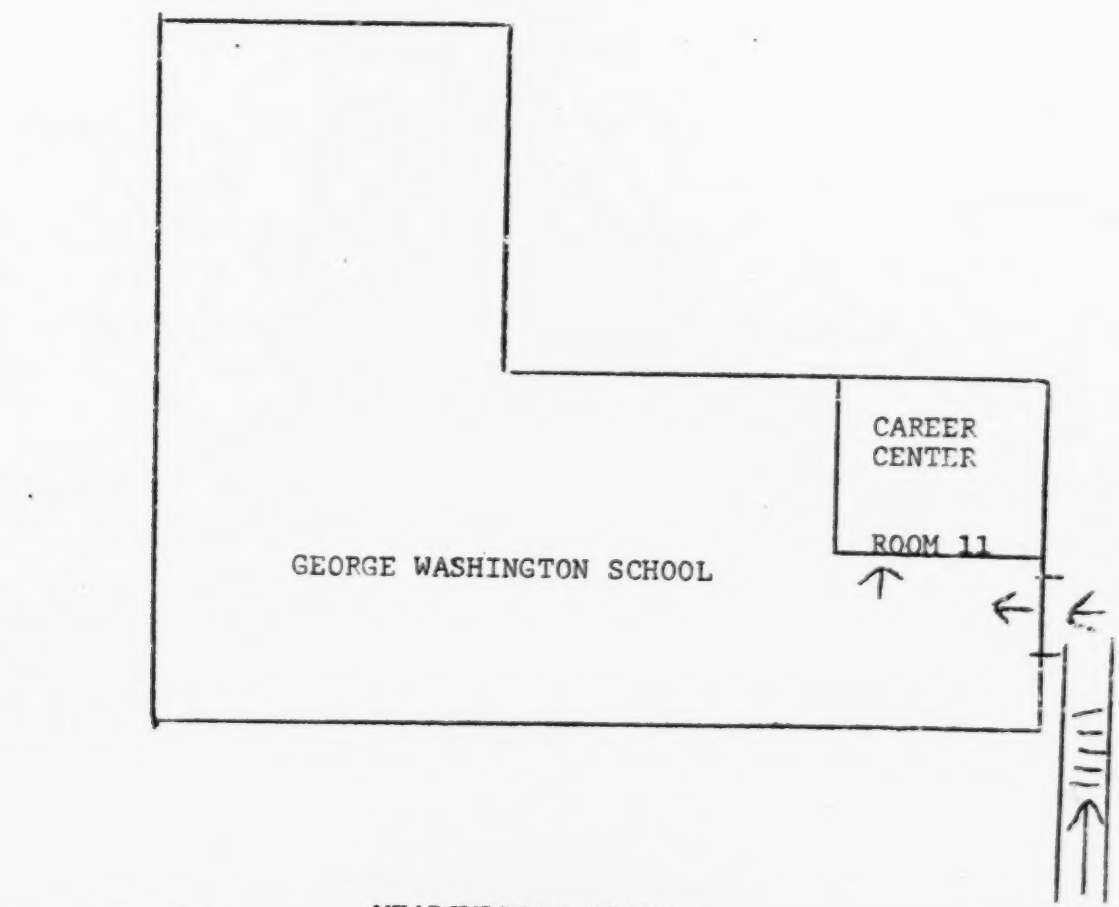
5. Post program schedule.

BEFORE CAREER CENTER VISIT

1. Organize pupils into teams of two, to work together in the study carrels while at the Center. Assign a number to each team.
2. Have the Orientation Study finished.
3. Have each child bring a pencil.

UPON ARRIVING AT CAREER CENTER

Speaking of manners....when you arrive at George Washington, classes will be in session. You will come in the end door, nearest Nottingham School, and proceed directly into Room 11. Coats, boots, etc. will be removed in the room. By doing this we shall minimize any chance of disturbing other classes. Please see that your class enters in single file and in silence



1. Encourage pupils to read books about occupations for leisure reading or for oral and written reports.

2. Pupils can assume the roles of workers through dramatic play. They can write short plays based on their interpretations of TV Programs, outside reading, or interviews with employed acquaintances.

3. With your guidance, pupils can also create the roles of various workers through spontaneous role playing. For example: a hospital pharmacy, a retail store, or a school library.

4. Use experiments and displays which may expand concepts presented in the Career Studies. For example: different kinds of thermometers might be demonstrated in connection with the Hospital Careers Study, or a toy car display with the Auto Workers Study.

5. Children may make scrapbooks on occupations...include vocabulary, pictures, clippings and original stories or reports of interviews with workers.

6. Pupils may be encouraged to interview acquaintances in various lines of work and report on these to the class.

7. Invite parents and other relatives of pupils to visit your class and describe their work.

8. Plan a field trip to a business or industry of interest to your class.

9. Let children help develop a vocabulary list to supplement words provided in the glossaries.

10. Use vocabulary lists for spelling bees.

11. Ask pupils to write stories or poems which reflect their concepts and interpretations of facts about workers.

12. Let pupils draw pictures to illustrate various jobs. Use for displays.

13. Organize pupils into teams to collect or draw pictures of people at work and use these in preparing weekly bulletin boards.

14. Ask children to help develop a chart of the major industries in Syracuse, showing how they contribute to community well-being.

15. List some of the many occupations on which Syracuse depends for successful business and industry.

INDIVIDUALIZED CAREER STUDIES

There are 21* Career Studies described in Section C of this manual. Please read these descriptions and discuss them with your class.

It will be necessary for you to send the Career Study order for your class to the Career Center 10 days before your Career Center visit, in order to be assured of delivery. Additional studies may be chosen after the class visits the Center. It is your decision as to:

a. how many studies each child will undertake (we suggest at least three),
b. the level of difficulty each will do.

Every Career Study will have accompanying Progress Sheet. These must be accounted for at the end of your scheduled program by returning them to the Career Center with all data recorded on them.

Career Study order form is in the self-addressed envelope inside the front cover of this manual.

CAREER STUDY KITS

Your classroom will have its own complete Career Study library for approximately 3 weeks. All materials necessary for the Career Studies will be a foot-locker, with lock, and can easily be stored in your classroom. See page 8 for suggestions as to appointing student chairmen of inventory duty. Inventories should be done daily on the books, cassette tapes, cassett recorders, filmstrips, previewers, folders, electrical extensions, etc. All items must be checked out before the kit is reassigned to the next classroom.

*There are 19 studies finished. The remaining two will be finished at a later date.

EVALUATION MATERIALS - RETURN TO CAREER CENTER

I. ATTITUDINAL SURVEY - PRE PROGRAM; one per student, administer before any part of program is begun.

ORIENTATION STUDY - PRE-TEST; one per student, administer before any part of program is begun.

ORIENTATION POST-TEST; one per student, administer at completion of Orientation Study.

BRING THESE THREE SETS OF COMPLETED ITEMS WITH YOU TO THE CAREER CENTER AT TIME OF FIRST CLASS VISIT!

II. PROGRESS SHEETS; one per child, per study.

POST PROGRAM ATTITUDINAL SURVEY; one per child

TEACHER'S ANECDOTAL SUMMARY; one per teacher

RETURN THESE COMPLETED MATERIALS WITH THE CAREER CENTER STUDY KIT UPON COMPLETION OF PROGRAM!

WORLD OF WORK ORIENTATION --- GOALS

As a result of this program student will

1- develop an awareness of the world of work by completion of a program of self-assessment in relations to career goals
2- develop an understanding of the relationship of school to work by successful completion of individualized study unit
3- develop an understanding of the meaning of work in our economic system, including such concepts as division of labor and interdependence and the importance of work.
4- build an understanding of the vocabulary of the world of work necessary for use in Career Studies.
5- develop an understanding of:
   a. Social Security
   b. Labor Laws
   c. Unions
   d. Professional and non-professional categories: (Degrees: Associate, Bachelors, Masters, Phd); (Entry level, unskilled, semi-skilled, apprentice, journeyman, Master)
6- Introduce world of work routines:
   a. job application
   b. want ads
   c. job interview
   d. pay rates (hourly, weekly, annually)
7- Introduce practice of individualized and/or independent instruction demonstrated by the successful use of the Orientation Study.

TEACHER'S GUIDE - ORIENTATION STUDY

An Introduction to the World of Work

This study serves a two-fold purpose:

A. To introduce the concept of exploring occupations and work-related attitudes and conditions, and
B. To acquaint teachers and students with this form of self-directed study.

This study provides the foundation for the entire program. It is essential that sufficient time be allowed to cover all activities throughly. For this reason, the Orientation Study is to be used in place of the traditional social studies and language arts programs, not in addition to it.

Most of the vocabulary and the understandings will be new to the students and so have been carefully developed within the study. It is recommended that these understandings be discussed with the class prior to doing each lesson, whenever possible with the filmstrip indicated.

INTRODUCTION: If sixth graders have reached the study of Ancient Greece, they will recognize the term philosopher. This is an excellent opportunity for discussion - to let the class interpret what the social and moral issues of today are, and how they might affect their lives; why it is essential that we learn to live together with our differences; how their future as a successful person depends upon understanding ourselves first.

LESSON I: Needed Materials: Filmstrip #1 - Who Are You; help wanted from newspaper for each child. Explain the purposes of this study (learning about jobs and learning about ourselves).

LESSON II: Needed materials: Filmstrip - What Do You Like to Do? Introduced by a personal interest inventory. This is an excellent opportunity for students to discuss how their interests differ and how these differences should lead to different life styles.
Page 11- since many of these terms are new, they are described in the glossary;
Page 12 - all subjective. This page should be used for class discussion. Pre and post test based on pp. 6 and 11.

LESSON III: Needed Materials: Filmstrip - What Good Is School? The idea in this important lesson is not usually appealing to children. It may be a good place for some students to role play Henry and Tom, or make up skits of their own. The yellow and pink study users should progress independently through pp. 16, 16a, and 16b, while the blues do only pg. 16, as is included in their study. Pre and post test based on pp. 15 and 16.

LESSON IV: Materials needed: Filmstrip - What Is A Job? The introductory pages should be done as a class activity. This is a good opportunity to review social studies in the framework of careers. From this point on, many job titles are mentioned in an effort to constantly expose the student to the many enormity of the world of work.

Job duties are stressed in the various exercises that follow; once again, the student is shown the many areas available to him, of all natures and at all levels.

Page 27 - This area treats elementary economics, developing only the basic concepts.

WORK - WANTS - PRODUCE - GOODS - SERVICES - SATISFY

Explain to students that work is an important part of the process by which people satisfy their wants. They should understand that (1) most of the things we want (other than air, scenery, sunlight) are not free, they have to be produced by someone. The people who do the work have to be paid and the things they use to make the products cost money, so the products are not free. (2) whether work is done at home or in a store, the results are the same: goods and services to satisfy wants. (pre-post test) Aim toward the understanding that work is the use of energy to (pre-post test 2d) produce goods and services. (Check students' comprehension of vocabulary and stress use of the glossary.)

Ask: Does the work you and others do around home help satisfy the wants of your family?
Are all the things a family wants produced at home? Do some families work in places other than home to produce goods and services for others?

Most of the goods and services we want are produced by others, working away from home. (pre-post 2c)

Goods and Services pg.27

The purpose of this is to distinguish between goods and services. After doing the exercise, discuss answers as a group. A chalkboard listing could be made of those workers who produce goods and those who provide services, compiled from students suggestions.

Enrichment - a bulletin board made up of newspaper and magazine pictures, labeled by occupations and the goods and/or services produced by each.

Page 28 - Division of Labor (pre-post test IV - 2b)
The different jobs done in a home by family members is a good way to introduce this topic. The exercise on pg. 28 is done in the school setting. Other more complex settings (industry, hospital, community, etc.) could be gone into from here.
In division of labor, each worker has special interests, abilities
Ask: What are the advantages of division of labor? (makes work easier, saves time, leads to higher quality product)

Page 29 - Interdependence of workers:
Each of us depends upon many different workers to produce the goods and services in our complex society. Discussion may be built upon interdependence from the family unit up to the global affairs.

LESSON V: Materials needed: pg. 31 filmstrip - What Are Job Families?

It is important to develop understanding of this term as a "community" of jobs all related, containing levels of work from unskilled up through the professional. This is the basis for the CAREER LADDER concept used throughout the program.

Page 32 - (pre-post V -1)
Deals with the terms unskilled, semi-skilled and skilled. The work is self-explanatory and can be expanded upon at teachers discretion.

Page 39 - The area of technicians and technical training will be new to most students. Since this is the area in which many of the students will be successful in their working career, it should be dealt with thoroughly. The courses available at Central Tech provide an excellent framework for discussion, also, the many 2 year technical schools.

Page 40 - This topic is open ended - suggested topics that may be covered are: degrees, (Assoicate, Bachelor's, Masters, Phd), graduate and undergraduate school, certificates and licenses.

APPENDIX - page 45 Social Security
The Social Security office (James St.) has been most cooperative with teachers who have called and requested a resource person to come to their classroom and explain the Social Security system. Following this, you may want to ask that office for the official application forms for each student to acquire his Social Security number.

Page 50 - Suggested meaning of labor union, from the American College Dictionary, Random House: An organization of workmen associated together for some common purpose. Example: better working conditions, worker benefits, etc.

Page 53 - Interview type #1 - although both types of interviews are important, the first type is essential for use later on in the career studies. All hints on page 53 should be learned and practices. Tell the students they should mark these pages for reference when they do their field trips and interviews.

Page 54a is a preveiw to pg. 55 in that it deals with the type #2 interview - those in which the reader is being interviewed. This sheet is for information only.

Careers in House Construction

Teacher's Guide

This is a very thorough Career Study identifying the many workers involved in house building. The workers are divided into the following categories:

a. Professional - architects, surveyors, draftsmen
b. Skilled - electricians, plumbers, roofers, etc.
c. Semi-skilled and unskilled laborers discussed briefly.

There is an abundance of material written into the study such as filmstrips and books which provide the basis for many activities.

The entire study, though lengthy, is very precise and explicit and should present no difficulty to any type of student.

Suggestions for Teaching and Implementing

The pupils doing this study should first of all look over the abundance of material available in the kit. They should carefully examine the booklet itself and the glossary. There are many illustrations that encourage discussion on the duties and materials used in the career field.

A trip to a building site for a house would be an excellent activity. Pupils could interview the workers; perhaps a parent of one of the students who works in this field could serve as a resource person.

The glossary should be stressed as a useful tool provided to help understand and do the study.

Restaurant Careers

Teacher's Guide

This study explores many jobs in the restaruant field, but most of the activities center around the duties of a waitress.

The study begins with a filmstrip introducing various occupations in this field. From here the pupil examines the five categories of people who deal in food services in general.

Using the many materials available, the pupil will learn through different activities some of the jobs and the work involved in each. Included in the first section of the study will be found an activity sheet entitled Lou's Quick Lunch. The purpose of this exercise is to provide children with learning to read menus, figuring the cost of several items, etc.

The last part of the study deals with the educational and personal requirements, the many types and kinds of restaurants, and the advantages and pay scale of the various jobs.

The study should not provide too much difficulty for any of the three levels as there is much material available. The blue level is very concrete and directs the pupil to the specific material. Both yellow and pink require more initiative in finding and listing items, the pink naturally demanding more than the yellow.

Suggestions for Teaching and Implementing

To introduce this study, the teacher could draw on the children's experience in eating in restaurants. the filmstrip "Job Opportunities in a Restaurant" gives an introduction to the various careers to be found.

Have the children look through the study before starting, so that they are aware of the content and the activities required. Be sure they particularly read over the glossary and look over the brown folder containing the material.

The enrichment activities suggest interviews with a restaurant worker. This could be handeld by having one student interview a worker and sharing his findings with the class or taking groups of children to lunch, having each pay his own way. Perhaps a waitress can come to your classroom to be interviewed.

To acquaint the children with the many types of restaurants, the phone book and a newspaper are required. Perhaps the children could relate orally their experiences in different types of restaurants.

The enrichment activities include planning a meal, serving it, etc. This activity lends itself very well to the Skills Phase program whereby the pupils doing this study could actually execute the planning and carrying out of the Restaurant when this part of the program is in your school.

Store Workers

Teacher's Guide

The career study on Store Workers was written with a very definite purpose in mind - to show the many job opportunities there are in the retail field. Emphasis was put on the many positions requiring a "high school or less" education. This was done to bring to the student's attention that all jobs don't require a college education. However, with a high school diploma one can attain a certain high standard in the employment field.

By the use of filmstrips, tapes, briefs, etc., the student discovers positions such as stock clerk, interior designer, display worker, comparison shopper and many more. Some of these job titles are familiar to the pupil while others are very unusual and should arouse a degree of curiosity as he works through the Career Study.

Cooperation, enjoyment of working with others, a desire to please others are all brought out in this Career Study. It is not too difficult, so it should not require a long time to complete.

Suggestions for Teaching and Implementing

1. SRA Briefs have been taped for non-readers. These should be made available to all the students working on this study.
2. The reading of graphs should be reviewed if this activity has not been covered in Math. (Bar graphs specifically.)
3. A discussion of what a career ladder is, what is found on it, why it's a good way to show information may help the students in completing such an activity.
4. This study affords an excellent opportunity to reach out into the neighboring community for store owners, clerks, people from home who work for stores to come in and speak to the students.
5. Letter writing especially thank you letters will be used as an activity and may need reviewing.
6. A walk through a shopping center or neighborhood to become aware of the different kinds of stores should prove both interesting and informative.
7. This would lead to interesting activities such as making a model neighborhood from construction paper, drawing scale models of stores (pink) or just paintings or drawings of what was seen on this walk.

NOTE: In this one instance, a combination of the yellow and pink levels would provide a comprehensive picture of jobs in the retail field. The activities that overlap are few and most students would benefit from the use of both levels.

Firefighters

Teacher's Guide

Notice the word, "Firefighters," because of women's Lib they are no longer called "Firemen." However, many of the books were printed before this movement became so active, therefore, the term "firemen is used in titles and in book content. Nevertheless, the new term is preferred.

This study covers service careers under government control with the advantages of job security, paid vacations, hospitalization, and requiring less than college schooling.

Through the use of SRA Briefs, tapes, Career Briefs and Summaries. The many job titles listed are described as to Nature of Work, Requirements, Conditions and Advantages.

Problem solving bar graphs, career ladders, letter writing and dictionary work are activities included in this study.

Terminology found only in firefighter careers is brought to the attention of the student.

The levels of this career study are written in a concise manner easily followed if directions are carefully read.

This study would be considered average - not too difficult nor too easy.

Suggestions for Teaching and Implementing

1. Letter writing is an activity that should be reviewed before the student begins work on this study.
2. He will meet the term "Career Ladder" which may need explaining.
3. Bar graphs are included in the yellow and pink level of this study. Children may not have worked with graphs at the time this study is implemented in your school. Refer to pages 6-8 in Section A of this manual for a sample lesson on bar graphs.
4. In the pink and yellow career study the children have to make a time line. This activity may be new to them and may need some teacher's guidance.
5. The use of the glossary needs to be stressed.
6. As an enrichment one of the children may wish to invite the firefighters who inspect the school to visit and speak to the class. These men are anxious to have the opportunity to talk with the children.
7. In the pink level, page 2, the following job titles could be listed:

    1. Hooksie
    2. Smoke eater
    3. Watchman
    4. Patrollo
    5. Inspector
    6. Volunteer Firemen
    7. Smoke Jumper

CAREER LADDER

Job Title	Salary
Fire Chief	$18,000
Deputy Chief	$14,500
*Fire Marshall	$10,530 - $11,730
Captain	$10,130 - $10,930
Lieutenant	$ 9,530 - $10,130
Firefighter	$ 7,830 - $ 9,330

This chart is included for your information - in case a firefighter is not able to talk with your class.

There is a form letter requesting a class visit to a Captain Duncan of the Fire Department. You can find this letter in packet 3.

* Please have students change this job title as the Fire Marshall is on a different salary schedule.

Careers in Office Work

Teacher's Guide

The Office Workers' Career Study provides the student with a basic background of information concerning what it would be like to work in an office.

All three levels (blue, yellow, pink) are not overly difficult or lengthy. Each, however, introduces to the student what is needed to be developed now in reference to education and personal traits and attitudes if he or she wishes to enter a position in an office.

The only real difference between the three levels involves the fact that the yellow and, particularly, the pink studies require higher levels of reading and writing skills than the blue study. The yellow and pink studies also touch upon a larger number of jobs found within an office.

The teacher, as in all the career studies, should discuss with the students the fact that attendance, personal traits nnd attitudes, and academic progress at the present time will most likely have a direct bearing on the gaining of employment in the future.

Airport Workers

Teacher's Guide

The Airport Workers study is about the different jobs connected with the running of an airport.

A large group of employment opportunities is covered here. It is intended to be done by those students who feel that they may venture into this area of employment. Like the others it is divided into three reading levels.

The study follows the same plan as the others which you have done. The first part is concerned with the Nature of Work. It contains many learning activities which expose the student to the numerous airport jobs and the duties involved in each.

The second phase of the study is conceived with the educational requirements needed in these jobs. The concentration here is placed on school and the subjects one should study.

Phase three informs the student of some of the different working conditions he may encounter, whether he will work indoors or outdoors and some of the safety precautions needed to be taken.

The fourth and final phase informs him of the advantages of the different jobs. It gives a salary chart and enables the student to find out the different salaries for the different jobs.

The student should obtain a sufficient amount of knowledge about airports when he completes this study to know whether or not to pursue his interests in the field.

Suggestions for Implementing and Teaching

The teacher should initially introduce Airport Workers in a general way. The children should look through the study and be aware of the length of the study, the different activities which are to be done, and the kind of resource material that is available to them.

It is essential that the teacher review or teach the class how to use the glossary. Many of the activities are dependent upon knowledge of the words listed in it.

The learning activities stress skill in the following areas:

1. Reading Comprehension
2. Outlining
3. True-False
4. Matching
5. Multiple Choice
6. Completion
7. Some mathematics in Phase 4

It is hoped that the student will apply these skills which he has learned in class to the completion of this Career Study.

People in Newspaper Careers

Teacher's Guide

The career study "People in Newspaper Careers" provides the student with a good understanding of the people and work involved in the putting together of a newspaper.

The Career Studies are divided into three levels with each level containing four sections.

The blue career study is relatively easy. The nature of work section, as in all levels, introduces vocabulary related to the newspaper industry. Contained in this section are job descriptions and a fairly good audio-visual presentation on just how a paper is put together.

The requirement is basically the same for all levels although higher levels of reading and writing skills are needed for the amount of training and education for a particular job is covered.

The conditions section concerns itself with what it is like to work at a particular job at a newspaper. Whether its indoors or outdoors, working alone or with others, etc. Similar materials are covered at all levels, but the depth is much greater in the yellow and pink studies.

The last section deals with advantages of working in the newspaper industry. Covered in this section are such things as salary, unions, fringe benefits and what the future holds for a particular position. Basic material covered in again similiar, but the enrichment materials in the yellow, and particularly the pink study, require a high level of reading and writing skill.

NOTE: One enrichment activity directs the student to imitate a reporter by taking notes and writing them up in story form. This may require extra guidance from the teacher.

Also, please note cartoon insert for page 7a for pink and yellow.

HOSPITAL CAREERS

Teacher's Guide

Hospital Careers opposed to Health Careers stresses only those positions connected with hospitals. Students believe these to be nurses and doctors, not realizing the many employees it takes to run this tremendous enterprise.

With this in mind, activities have been included from candy striper to doctor to show students that one can start in this field with little education then through desire and continued education can climb up the career ladder as far as they wish to go.

New filmstrips, books and pamphlets describe the duties, educational and personal requirements, working conditions and advantages of careers in a hospital community.

The study introduces the concept of the "hospital team", (workers who deal directly with the patient) as well as the behind the scenes workers who are necessary to both the patient and the team.

The study is not a difficult one but presents job titles which will be new to most students.

Suggestions for Teaching and Implementing

IMPORTANT - Many of the same resource materials for this study are used in both the hospital and health careers studies. Children should be cautioned to check both brown folders for these materials and to see that each is returned to its proper place.

Have the children look through the study before starting so they are aware of the content and the activities required. It is important that they become familiar with the glossary and the materials in the brown folder.

Children should be prepared for independent use of the resource material listed in the bibliography.

The importance of "reading and following directions" cannot be stressed too much. It will be an additional help to the children if they are taught to

1- first survey the questions they are to find the answers to,
2- read to find the answers. Most of the exercises call for specific information - one title, three duties, etc.

Enrichment activities include drawing pictures, making sample booklets, making paper nurse caps, etc.

One of the activities is to interview the school nurse or health clerk. She is a valuable resource person who can contribute a great deal to the depth of the study. She should be encouraged to work with the students, especially in the section "Requirements."

To acquaint the children with the hospital facilities in the Syracuse area, the use of the yellow pages in the phone book is required.

Most children have had some exposure to hospital experience and could relate it orally. This would enrich the study for himself and the entire class.

the yellow and pink levels are given the opportunity to construct their own crossword puzzle and will need graph paper to do so.

Charts are used in the fourth section, "Advantages". The materials needed for these charts are specified in each case.

Skimming is used as a learning activity throughout the study. It is a technique that needs to be encouraged as the children search through the material for their answers.

FASHION AND CLOTHING CAREERS

Teacher's Guide

The Fashion Career Study begins with an introduction to the many jobs that are to be found in the fashion world, and continues with vocabulary unique to this study.

A filmstrip "Manufacturing Clothing" and several books give an overview of how a garment is made from start to finish. In the pink and yellow study, the pupil learns a bit of the history of the development and use of clothes from ancient to modern times.

Next there is a series of activities designed to identify job title with job descriptions and each of the 3 levels examine the job of a dressmaker, model, and designer in some depth.

The rest of the study is devoted to the conditions, requirements, and advantages of various jobs. Included in the last section are table (blue) and graph reading (yellow and pink) with related math exercises.

The blue study is fairly easy and should present no problem to a slower student. The yellow study requires quite a bit of reading and finding facts, but the study is quite precise about the location of the answers. The pink study is relatively difficult and would require a student with real interest and diligence.

Suggestions for Teaching and Implementing

Children,especially girls, are interested in clothes and the teacher can introduce this study by capitalizing on that interest by bringing in teen fashion magazine, swatches of fabric, etc.

The student who does this study should be encouraged to acquaint themselves with the entire study, the glossary, and all the material available before beginning.

This study especially lends itself to working in groups, but it should be stressed that books and pamphlets required in the activities be read thoroughly, carefully noting titles and page numbers.

Since modeling is a very limited career field, good grooming is stressed in the blue and yellow study rather than job description. Here the teacher may use the 6th grade health book or other material to present ideas on grooming.

The enrichment activities call for a field trip and interview with a department store worker in the clothing section, but if this is not possible, the teacher might invite an attractive girl to the class to share her ideas on clothes and grooming.

One of the enrichment activities call for the planning and giving of a fashion show. This might be included in the skill phase of the program,when the class does the restaurant project,under the heading "Fashions at Luncheon."

Telephone Workers

Teacher's Guide

This study is available in only the yellow and pink reading levels. (The blue level is currently under revision)

The yellow career study is average in length and includes enough vocabulary work to enable most students to learn about the various jobs in the telephone industry. There are activities in which the student is gradually led to learn what different job titles describe.

The requirement section discusses the education and training necessary for a particular job. The conditions section tells what the job will be like——working alone or with others, outdoors or indoors, etc. The advantages section deals with salary, fringe benefits, and the future of a particular job.

The pink career study is somewhat difficult and long but provides for a really in-depth study of almost every job at the telephone company. A high level of reading and writing skill is required for this study. This career study also has work within it which will be presented to the class when the student has concluded the study.

PEOPLE WHO WORK IN CONSERVATION

Teacher's Guide

This study introduces the term "Conservation" to all three levels, including the jobs of the forester, soil conservationists, and wildlife conservationists. The True Book of Conservation would help the teacher in establishing a background for this study.

Included in the first section are filmstrips about the paper industry and the many jobs offered by it. (Some of thw words may be difficult but most are defined in the glossary.)
Also included is a list of job titles and descriptions which have to be filled in.

The last part deals with salary and other advantages requiring the children to complete graphs.

Many enrichment activities are suggested that can be begun in class and completed during the Skills Program.

The study may tend to be difficult because of the vocabulary in the filmstrips. Serious, interested students should find this study fun. If the student is more interested in animals, he should be referred to the animal study.

Suggestions for Teaching and Implementing

The teacher should stress the use of the glossary before children begin. Many terms that are difficult in filmstrips must be defined.

The following items must be understood before the students begin the study:

1. What is a planter box?
2. What is a green house?
3. What are relief maps?
4. What is a collage?

These crafts are part of the enrichment activities.

Children should know that all information about requirements is in tne brown folder. They will have to read and listen to tapes from the S.R.A. briefs, dependent on their need for information.

Bar graphs are used to compare salaries, therefore, the making and interpreting of a bar graph should be taught.

Postal Careers

Teacher's Guide

This study is about careers connected with the post office. The greatest emphasis is placed on careers requiring less than or a high school education to stress that one can attain a job future without having a college education. Because of this,most activities center around mail handlers, window clerks, distribution clerks, mail carriers, and parcel post delivery men. The service to society is also included in this study.

A filmstrip entitled "The Post Office and Its Workers" introduces the three levels of this career study to arouse interest in the many postal positions available.

Books play a very important part in the activities of this study. Hopefully, children will read these books when time permits.

Math questions, writing a complete sentence, alphabetical order, filling in blanks, working with a career ladder are some of the activities included in this career study.

Each level includes a glossary of words used in this study.
The postal study is not too difficult for all levels. Directions are easily understood.

A visit from the mail carrier who delivers the school mail is an excellent method of stimulating interest in this study. He will give the teacher the number to call to arrange this visit.

If a field trip to the Post Office is arranged, have each child take with him a letter and envelope addressed to himself. Then he can watch each process a letter goes through before it is delivered to his home.

Suggestions for Teaching and Implementing

Because use of books is one of the main activities in this study emphasis on following directions, carefully reading titles and page numbers should be brought to the pupil's attention.
In some cases the child is directed to list a specific number of answers. If the number is not given then he is required to list all the answers. i.e. list 4 duties or list the duties.

Whenever SRA Briefs are used in an activity a tape of the SRA Brief has been made to be used by the non-readers. Children working on all three levels may use and enjoy these tapes.
Each level has a glossary included pertaining to words used in the particular Career Study. A discussion of the purpose of a glossary will help the child see its value and avoid the teacher's necessity to explain the meaning of a word.
As more enrichment children could illustrate a trip to the post office, a mail carrier in uniform with bag, cap, etc., a booklet or whatever proves most interesting to them.

People Who Work With Animals

Teacher's Guide

This study is one of the easier sutdies to complete. There is only one filmstrip for this study which deals with animal care. Introduced in this study are the veterinarian, pet store worker, zoo keeper, zoo director, dairyfarmer, poultry farmer, and fur farmer.

Many of the resources, especially the pamphlet,"How to Live With a Neurotic Dog" are amusing and enjoyable. If the children are careful to follow the directions, they should have no difficulty with this study.

Suggestions for Teaching and Implementing

Looking for details is one skill that is used frequently in this study. Children are required to read a book or pamphlet and then to list their answers to a question.

Most of the enrichment activities can be completed in class. If the children choose to make a bird feeder, it can be completed during the Skills Program. A visit to a pet store is an out of class activity that children can do on their own. Other activities include making an animal cage from a shoe-box, making a scrapbook of animals (this could be given to a primary class afterwards), and writing a story. The pink level is given a crossword puzzle to do.

All SRA material has been taped for the children to listen to as they read the stories. All material except for filmstrips and books are in the brown folder.

Auto Workers

Teacher's Guide

This career study begins with the examination of the various jobs in the automotive industry. Throughout the study in all levels, the occupations of Gas Station Attendant, Auto Mechanic, Car Washer Auto Body Repariman, and Automotive Brakeman are studied in more depth. The filmstrip Working With Cars is used as an introduction to the study.

The study also examines the nature of work by using such filmstrips as Changing a Flat Tire and using such books as Automobiles-How They Work.

The rest of the study includes the conditions,requirements, and advantages of the jobs in this study.

The Blue Career Study is quite easy and short with the directions being fairly explicit about where material may be found.

The Yellow Career Study introduces the student to the concepts of vocational or technical schools and on-the-job training. This study also includes some vocabulary and alphabetizing not found in the blue study.

The Pink Career Study has even more language development such as unscrambling words and reading facts from a newspaper and putting them in outline form.

For all three levels this study should be relatively simple and be accomplished without too much difficulty.

Suggestions for Teaching and Implementing

The natural interest most boys express in cars and mechanical skills can be capitalized on through use of car ads in magazines, collections of toy cars, or drawings that the children can make.

As in all the career studies, the entire study should be looked over thoroughly, including the material available. Emphasis should be placed on familiarizing the pupil with the glossary, and the careful reading of the assigned material.

A visit to a garage or vocational school mechanics department would be most helpful in the development of this study. The Career Center will try to arrange this type of field trips.

The inspection sticker is mentioned in this study, so the teacher might be prepared to answer any questions concerning car inspection or let the children examine a car inspection sticker.

Since many of these studies require children to find facts from resource materials independently, the teacher should spend time developing techniques for this type of learning.

Careers in Transportation

Teacher's Guide

This is a study of some of the jobs available in the world of transportation. Becuase this is such a vast field to cover, only a few jobs are stressed in depth.

The first section of this study begins with a brief explanation and history of transportation. It is hoped that the pupil will understand that man has always been concerned with the moving of people and things from ome place to another.

In the next section, jobs in the field of transportation are broken down into four major areas. These areas are:

1. Drivers, i.e. busdriver, taxi driver, ship's captain
2. Loaders, i.e. fork lift operator, winch operator
3. Planners, i.e. supervisor, dispatcher, salesman, traffic manager
4. Helper of People, i.e. stewardess, chef, ticket salesman

Under requirements, the pupil is asked to study one, two, or three jobs, according to his level. The jobs of busdriver, power truck driver,and shipping and receiving clerk are those he can choose from.

In the remaining parts, explanations for the jobs of routeman, taxi driver, and long-distance truck drivers are given. Charts and a graph show the salary scale of jobs in the world of transportation.

This is a good study for those interested in being a busdriver or truck driver. The blue level is a little difficult, but those chosing it will be able to answer the questions if they follow the directions closely. These directions guide them, almost word for word, to the correct answers. The wide range of activities and resources should make it interesting for the yellow and pink levels.

Suggestions for Teaching and Implementing

There are several ways a teacher can introduce this study to those interested. The filmstrip "Transportation and Transportation Workers" could be used. The pupils interested could take a walk around the neighborhood, especially if it is near a major street, and make a list of the modes of transportation they see on their walk. A transportation scrapbook could be made from an old magazine or a story could be written about "How French Perfume Came to Our House" or "How Dannish Bacon Got to Our Table".

Before a pupil begins this study he should look over the booklet carefully. He should take time to read the glossary and become familiar with the new words he will meet. He should also look through the booklet to see the various jobs studied in depth.

The interview tapes of a taxi driver and a shipping and receiving clerk should be listened to carefully. There are answers to be given after each tape according to level.

Pupils should be encouraged to interview a bus driver or a truck driver. Perhaps arrangments could be made for the school bus driver to come in a talk to the class. A round trip on a city bus would provide a good opportunity for them to see the duties of a bus driver. A trip to a local trucking terminal would also be good to see the way trucks are loaded.

Pupils are encouraged to use newspapers to find out about available jobs in the field of transportation.

Careers in Heavy Construction

Teacher's Guide

This study acquaints the pupil to the many people who work together to build bridges, dams, and large buildings. The job opportunities in this field of heavy construction are numerous.

In the nature of work, the pupil is introduced to the three different groups of workers found in this field. Under professionals he studies briefly the surveyor, architect, civil engineer, and draftsman. Carpenters, structural iron-workers, bricklayers and machine operators are met under the section involving skilled and semi-skilled workers. Unskilled workers make up the last group. These are the construction laborers.

In the next part, the pupil looks for the qualifications of various jobs in the field. Special stress is given to the training and the type of personality each worker must have.

The last two sections cover the conditions and advantages of a job in this field. Graphs, charts and a pupils knowledge and research are used.

This study presents a good overview of the many jobs available in the field of heavy construction for each level readers. Naturally, the blue level is shorter and requires less than the yellow or pink levels.

Suggestions for Teaching and Implementing

This study could be introduced in many different ways. Boys and girls, on their way to school often pass many building sites. A discussion about the number of men and the kinds of machinery they see on these sites, could introduce the unit. The book Come to Work with Us in House Construction contains poems about the many available jobs in the construction field. A game of "Who Am I" using these poems would be an enjoyable way to introduce the unit. The filmstrip Heavy Equipment Operators could also be used.

The glossary contains many words they will meet in the study. Be sure to have the pupils look it over carefully. Have them also look over the booklet to see the many activities and materials they will use.

In this booklet, there are many activities. The SRA Briefs are used as sources for requirements, conditions and advantages. There are also two tapes with filmstrips to use.

The pupils are introduced to the symbols an architect uses. They are then asked to make their own blueprints of specific places. The [illegible] group is also asked to use Encyclopedias for information.

Health Careers

Teacher's Guide

IMPORTANT Many of the same resource materials are used in both the Hospital and Health Careers studies. Children should be cautioned to check both brown folders for these materials and to see that each is returned to its proper place.

Health Careers is such a tremendous field it was necessary to limit this study to those positions considered most common as nurse, pharmacist, aides, public health nurse, etc.

Through filmstrips, books, pamphlets and cards the duties, educational and personal requirements, working conditions and advantages of careers in the Health field are explored.

This is not a difficult study for each level but it is a very thorough one and is longer than some of the other career studies. However, it covers such important services through use of many tapes and interesting activities. The length of the study should not be a deterrent to choosing it.

Suggestions for Teaching and Implementing

1. All SRA Briefs are taped for the non-readers. These may be used by all the students.
2. Use of the bibliography is most important as often the children are referred to the bibliography for titles of books, pamphlets, etc. to be used in an activity. A lesson on this may be needed.
3. Emphasize the importance of reading directions so the student gives the exact information asked for as, one filmstrip, four duties, etc. Often books are to be completely read. These will be easy reading.
4. Outlining is an activity in this study. The format of an outline may have to be reviewed before children doing the pink or yellow level can complete the study.
5. Writing letters may have to be reviewed before this study is begun.
6. Math problems involving adding, subtracting and multiplying are included in this study.
7. A career ladder appears in the pink level. The term career ladder may need defining.
8. Planning is mentioned as an activity in the pink study. This word may also need defining.

Policemen

Teacher's Guide

This is a good study for those pupils who are interested in becoming policemen. In it, the pupil becomes familiar with the various kinds of policemen. They also see the different tools needed by policemen and have an opportunity to meet the language familiar to this field. The requirements and conditions of a career in this field are easily understood. The advantages are shown on a career ladder.

The blue level of this study is very easy to follow. The book "About Policemen" is written in such a way that the information needed can easily be obtained. The yellow and pink are equally as interesting and contain activities that will challenge the reader of each level.

Suggestions for Teaching and Implementing

This study can easily be introduced through a discussion about Policemen. In the yellow and blue studies there is a letter to an editor that could be read to the class. There are two filmstrips that could be shown on the training and duties of a policeman. Articles found in the daily newspaper on crimes and other events could also be used.

A trip to the Public Safety Building would be an excellent activity to include. Arrangements can be made through Captain Donahue's office at the Public Safety Bldg. If you would prefer, a policeman to visit your classroom, please use the letter in packet 3. Pupils could interview the school crossing guards.

In both the yellow and pink studies there are activities on the history of policemen and information about policemen around the world. Pictures and bulletin boards can be made from this information.

Essential to the introduction of this study, is a careful examination of the study itself and the glossary. There are many illustrations that encourage discussion on the duties and materials used in this career field.

The pupils should read the prescribed book thoroughly. Besides these, the book "West Side Cop" is recommended for the pink level.

This study involves the protection and safety of each of us in our daily lives. The idea of obedience to laws both inside the classroom and outside should be stressed.

Policeman

This chart is included for your information in case a police officer is not able to talk with your class.

Salary	Job Title
$20,000	Chief
$14,500	Deputy Chief
$10,200	Captain
$ 9,400	Lieutenant
$ 8,600	Detective-Sergeant
$ 7,800	Patrolman
$ 7,800	Policewoman

School Workers

Teacher's Guide

The Career Study in School Workers was designed to show the many job opportunities there are in the education community, such as maintenance men, teacher aides, teachers, librarians, athletic coaches, health workers and administrators.

The study begins with a filmstrip introducing these occupations. From here the pupil investigated these fields in greater depth. A field trip to the Board of Education is includes as an enrichment activity. Educational requirements for workers unskilled up through the professional levels are dealt with in the section "Conditions of Work". The number of fields the child studies is determined by the color of the study he is doing. Here the format of the study varies from the others in that the learning activities do not relate only to conditions of work, but rather encompass all facts about that career. This is necessary due to the enormous amount of material that is related to jobs in the school workers field. You will find also, the learning and enrichment activities for each field are located together for the sake of continuity.

Although the study is lengthy, the child is given a choice of activities to follow within it...as indicated on the Progress Sheets.

No learning activities are given in the section "Advantages", as these had been covered in the previous section.

Suggestions for Teaching and Implementing

The filmstrip provides a good introduction. Children are familiar with the positions described and are usually quite interested in finding more information as directed.

The use of charts to obtain information is included in all levels. Students may need extra help in understanding the job titles and terms used in these.

Resource people within your buildings should be utilized as much as possible. It is an excellent opportunity for students to conduct interviews with these people.

Refer to Section A, page 5 of the manual for instructions on planning field trips. Also, refer to packet # 3.

IMPORTANT: DO NOT undertake field trip to the Central office until you have read and carried out the preparatory steps as outlined on the special instructions in Packet 3.

SECTION C

SKILLS PROGRAM

Implementation and Teacher's Guide

Each classroom will receive the equivalent of two full days of related occupational skill studies and activities conducted in the Skill Trainer Van. The emphasis of these activities is on projects that tie in with the regular curriculum and will develop materials which will remain in the classroom.

It is strongly recommended that the classroom teacher guide the student's decision as to project selection, because many projects lend themselves beautifully to becoming future teaching aids.

In the implementation of the industrial skill phase, the Skills Teacher will provide each student with one or more Activity Packets (similar to a workbook), about one week prior to the arrival of the Skill Van. These Activity Packets were prepared by a teacher writing team and correspond to the career areas studied. They direct the students into activities which introduce them to the tools, machines and skills necessary within the career areas studied.

It is not expected that the student develop proficiency with the tools, machine or skill they are practicing; the idea is merely to give the student an opportunity to have "hands on" exposure to things that relate to their career study.

It is very important that each student return the Activity Packets to the skill teacher when they have completed the work. They will be reviewed by the skills teachers, graded (number of skills involved, number of skills utilized), and scored for future program evaluation.

When the Activity Packets arrive at your classroom (about one week prior to the arrival of the skillvan), the teacher should plan with the class the projects to be completed that can be used as teaching aids. For example, the flourescent growing lamp you will be furnished will accomodate 4 planter boxes,(sample sketch and bill of materials attached). At the completion of the Skill phase of the program you will have all of the materials required for a good year-long Conservation study. A wind vane and anemometer built during the skill phase could provide a useful tool in teaching about weather instruments and how they work. A partial list of suggested projects is included for your convenience. All of the plans and materials are available at the Skill Van.

The Skill Trainer Van contains equipment and materials related to seven occupational areas (Communications; Distribution; Health; Home Economics; Office; Trade and Industry; Technical). The following cross-index will help the teacher apply the I.C.S. and Skill Trainer equipment. In many cases there are overlapping areas.

OCCUPATIONAL AREAS	RELATED CAREER STUDIES
Communications	Telephone Careers Police Fire Fighters Newspaper Workers Conservation Post Office Airport Workers
Distribution	Restaurant Careers Fashion and Clothing Careers Transportation Careers Store Workers Newspaper Worders
Health	Health Careers Hospital Careers Police Careers Fire Fighters
Home Economics	Restaurant Careers Fashion and Clothing Careers Hospital Careers
Office	All Career Studies
Technical	People Who Work with Animals School Workers Telephone Workers Auto Workers
Trade and Industry	Heavy Construction Workers House Construction Workers Telephone Workers Restaurant Careers Auto Workers Fashion and Clothing Careers Transportation Careers

Equipment and Materials in Skills Trainer

1. Complete one-bed hospital room with Chase Doll and physical examination equipment (stethoscope, sphygmomanometer, etc.) Either a professional or a paraprofessional representative of the medical profession instructs.

2. Complete short order restaurant (grill and oven, cooking and serving utensils, table with 10 chairs, food preparation table).

3. Business Machines - 2 IBM Sectric typewriters
   2 electric printing calculator
   3 cash registers
   1 grocery store type
   1 adding machine type
   1 restaurant type

4. Crafts materials for construction of models, teaching aids, projects using wood, metal, clay, paper mache, plaster of paris, block printing.

5. 2 sewing machines with attachments

6. Wood shop and construction materials area with work benches (2), large variety of power and hand tools, electric soldering guns(2), saw horses (8).

A Sample Project from the ICS CONSERVATION Activity Packet

Involves: math, science, social studies

The student will be given a selection of several projects requiring various skills and aptitudes needed by people who work in the area of conservation.

Perhaps he will elect to construct a planter box which will later be filled, 1/2 with good soil and 1/2 with poor soil, to illustrate the necessity of soil conservation. It is suggested that sometime prior to the arrival of the skill trainer Van, the student (or a group) plant some seeds in a milk carton or paper cup for later transplant to the planter box. (Your classroom will be furnished with a special flourescent growing light for this project).

With the arrival of the Skill Trainer Van, the student will be provided with a set of plans and all of the tools and materials necessary to construct the planter box. His activities will be directed by the classroom and Skills teacher.

SKILLS INVOLVED:

1. Reading a simple sketch.
2. Selecting proper materials from a B/M.*
3. Measuring out a board (smallest increment generally 1/8 inch)
4. Using tools: a) saws (various saws for various jobs, both hand and electric)
   b) plane and forming tool
   c) hammer and nails

RELATED ACTIVITIES:

1. Cooperating with others.
2. Selection of proper soils (silviculture)
3. Selection of plants to be grown (botany and dendrology)
4. Transplanting and care of young plants (forest management)

* Bill of Materials

OVERVIEW:

For the most part all of the skill activities are conducted simultaneously. The program is both intense and comprehensive. By the time the Skill Van arrives each student should have selected projects or activities in which he or she will work.

For example, if a student has studied in the occupational area of Health, his related skills activities should be confined to the Hospital and Health skill area,and his skill participation will be from the Health-Hospital Activity Packets. If a student has studied in the area of Trade and Industry he might be more flexible as to activities (see related career studies under Trade and Industrial). This area could involve - the wood shop - sewing machines - office and related business business equipment.

A loose schedule of activities would be as follows:

First session: (usually 2 hours)

1. Student Orientation to Skill Van - including introduction and instruction on many tools and machines.

2. Professional and/or paraprofessional personnel conducts exercises in the Hospital and Health career area. (Students concerned with careers in Health, Hospital, Police and Fire assemble in this area.)

3. Restaurant and Food Processing students proceed according to attached schedule, "Restaurant Program".

4. Students involved with business machines and related equipment start activity packets.

5. Students involved in wood/construction materials shop begin projects according to preplanned activity packet selections.

6. Students involved in clothing and fashion design begin in sewing machine area.

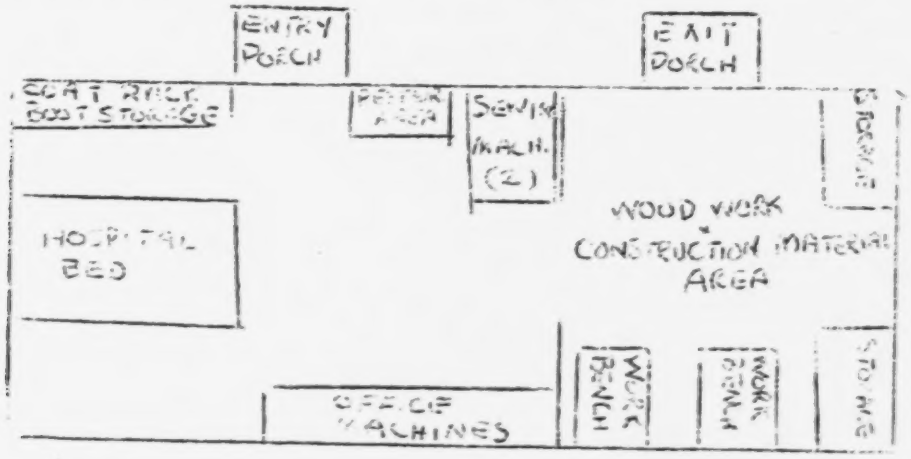
Second session: (usually 2 hours)

Most students will still be working in their first career study area. In some cases they will have completed the skill offerings in this and will be ready to go on to another activity packet.

Third session: (usually 2 hours)

Generally most students are rushed to complete projects during this final session. In addition, the final phase of the restaurant program (serving a lunch to their classmates) will be a disruptive influence.

The Skill Trainer Van itself is approximately 12' x 50' long and is designed to comfortable accommodate 30 students and a teacher. Teh Van is air conditioned and heated by a self-contained constant air flow system. There are two large entry and exit doors with emergency crash bars. Emergency lighting and 2-way intercom between the Van and the school office is provided. Provisions have been made for a coat rack and boot trough.



Note: there are NO lavatory facilities aboard the Van. Arrangements must be made before entering the Van.

Restaurant Program

Most classes will participate in the restaurant activity. Ideally, the program is structured along the lines of operating a real restaurant. Due to the complexity of the program,it must be somewhat organized prior to the arrival of the Skill Van. This could be done by the classroom teacher while guiding the students through their career studies in Restaurant Work.

Outline

Prior to Arrival of Skill Van:

Formulate some type of Restaurant workers structure: From those students studying Restaurant Careers select or have the children choose; 1 owner, 1 manager (either of which could double as a cashier), 1 or 2 cooks, a salad chef (if salad is to be served), a pastry chef (if deserts are to be served) and 2 or 3 waitresses. All of the participants will serve as busboys/girls and clean up committee.

First Session at Arrival of Skill Van:

Restaurant workers will decide on the food to be served. They will type or draw menus and make arrangements for obtaining the food. The program does not furnish food, paper plates, knives, spoons, forks, napkins,etc. Some things can be supplied by the school cafeteria. Some things have been donated by neighborhood grocers or parents. Suggestion: Pancakes are inexpensive, 30 to 40 small pancakes can be made from one 59¢ box of pancake mix. An 18" oblong sheet cake can be cut into enough small pieces to serve an average class at about 69¢ plus frosting. The skill van is equipped with a grill-oven type cooker. Only things that can be grilled or heated in an oven can be prepared. Hamburgers, hot dogs, steaks, grilled cheese sandwiches and french fries (frozen and cooked in the oven unit) have been successfully prepared.

Second Session:

Cakes are baked - salads prepared - jello is always easy and good.

Third Session:

Tables set - food prepared and served - clean up. Many students will have finished one or two activities near the end of the third session and are now good candidates for "customers" at "the Restaurant" They can receive play money from the Skills Teacher, order from the menu, pay the check, figure the tips and receive their change.

Suggested List of Projects for Which Plans or Activity Packets Are Available

A. Airport - Transportation

1. Operate electric typewriter
2. Operate electric printing calculator
3. Operate accounting machine cash register
4. Build weather instruments (wind vane, anemometer, wind sock)
5. Build telegraph - show how telegrpah is used to make ticket reservations)
6. Build model airplane
7. Build model wagon (covered or Roman)
8. Build model chariot

B. Conservation

1. Making paper mache diorama of land formations (mountains, plateau, faults, drumlins, etc.)
2. Build planter box
3. Build relief map (or diorama) to illustrate soil erosion
4. Build telegraph
5. Build birdfeeding station, birdhouse, greenhouse, animal cage
6. Build weather instruments - wind vane, anemometer

C. Fashion and Clothing

1. Design and sew on a sewing machine an original sample (doll size)
2. Cut and sew different types of clothing worn by people studied in social studies
3. Design and make a piece of haute couture jewelry
4. Design, cut and sew an apron for waitress to be used in restaurant program
6. Making and dressing hand puppets
7. Design and block print curtains for classroom door.

D. Office Workers

1. Operate office machines
    a) IBM Selectric typewriter
    b) Monroe printing calculators
    c) NCR cash registers

E. Newspaper

1. During time skill program is at school, gather news, make photos, and publish a "onesheet" newspaper of skill program activities
2. Make block printing

F. House Construction - Heavy Construction

1. Build electro-magnetic crane
2. construct working model Roman aqueduct
3. Make greenhouse
4. Make puppet stage
5. Make classroom storage cabinet
6. Construct model log cabin
7. Make demonstration models to illustrate principle of lever, inclined plane, wheel and axle, block and tackle, beam balance

G. Hospital - Health
1. Attend activities with nurse and para-professional people brought in
2. Make splints to demonstrate application of bandages
3. Making models to demonstrate muscles - bones - tendons
4. Make triangular bandages
5. Make models to demonstrate respiration
6. Make dental impression mold and carve teeth

H. Store Workers
1. Operate cash registers
2. Participate in grocery store program
3. Inventory Skills Van

I. Fire Fighters - Police
1. Attend activities of para-professional (first aid) people
2. Complete auto accident report from tape recorded conflicting testimony
3. Build telegraph

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Dear Principal (Teacher)

This is a reminder that the G.O.O.P. is scheduled in your school on the following dates:

Orientation Program		Career Center Visits	
class 1. _____	to _____	class 1. _____	to _____
2. _____	to _____	2. _____	to _____
3. _____	to _____	3. _____	to _____
4. _____	to _____	4. _____	to _____
5. _____	to _____	5. _____	to _____
6. _____	to _____	6. _____	to _____

I.C.S. Program		Skills Trainer Program	
class 1. _____	to _____	class 1. _____	to _____
2. _____	to _____	2. _____	to _____
3. _____	to _____	3. _____	to _____
4. _____	to _____	4. _____	to _____
5. _____	to _____	5. _____	to _____
6. _____	to _____	6. _____	to _____

Career Study Kits should be inventoried and ready for truck pick up on _____.

Any lost or damaged materials or equipment should be immediately reported, by phone, to the Career Center. Also, should be clearly identified and notice of same should be in an envelope attached to the inside top of Career Study Kits.

All evaluation materials in packet #2 should be returned to the Career Center by _____.

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

NAME _____ *SCHOOL* _____

PRE _____ *POST* _____ *TEACHER* _____

COSMETOLOGY - Blue

Assigned	*Learning Activity*	*Done*	*Assigned*	*Enrichment*	*Done*
Nature of Work					
1.	Reading, listening to a tape, answering questions. p.p. 1&2		1.	Make a scrapbook of magazine pictures. pg. 8	
2.	Answering questions, pictionary. pg. 3		2.	Make a scrapbook of hairstyle pictures you have named. pg. 8	
3.	Pictionary. pg. 3a				
4.	Reading, listening to tape. pg. 4		3.	Planning a demonstration of setting hair. pg. 9	
5.	Pictionary, listening to tape. pg. 5				
6.	Reading, answering questions. pg. 6				
7.	Reading, worksheet. pg. 7				
Requirements					
1.	Reading and worksheet, pg. 10 and 10a		1.	Listing beauty schools. pg. 12	
2.	Word meaning, listing requirements, writing sentence. pg. 11		2.	Planning a visit to your class by students from Central Tech	
Conditions					
1.	Reading - listing reasons. pg. 13		1.	Reading and listening to tape. pg.14	
Advantages					
1.	Reading and worksheet. pg. 15		1.	Crossword puzzle. pg. 16	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

NAME _____ *SCHOOL* _____

PRE _____ *POST* _____ *TEACHER* _____

COSMETOLOGY - Yellow

Assigned	*Learning Activity*	*Done*	*Assigned*	*Enrichment*	*Done*
Nature of Work					
1.	Reading, listening to a tape, answering questions. pp. 1&2		1.	Visit a beauty shop. pg. 8	
2.	Answering questions, pictionary. pg. 3		2.	Plan a hair setting demonstration. pg.9	
3.	Pictionary. pg. 3a				
4.	Reading, listening to tape. pg. 4				
5.	Worksheet, pg. 4a				
6.	Pictionary, listening to tape. pg. 5				
7.	Reading, answering questions. pg. 6				
8.	Reading, worksheet. pg. 7				
Requirements					
1.	Reading and worksheet. pp. 10&10a		1.	Listing beauty schools. pg. 12	
2.	Making out a license. pg. 11				
Conditions					
1.	Reading, listing reasons. pg. 13		1.	Reading, listening to tape. pg. 14	
2.	Reading, worksheet. pg. 13a				
Advantages					
1.	Reading, worksheet. pg. 15		1.	Crossword puzzle. pg. 16	
2.	Reading, worksheet. pg. 15a				

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

NAME _____ SCHOOL _____

PRE _____ POST _____ TEACHER _____

COSMETOLOGY - Pink

Assigned	Learning Activity	Done	Assigned	Enrichment	Done
Nature of Work					
1.	Reading, listening to a tape, answering questions. pp. 1&2		1.	Visit a beauty shop. pg. 8	
2.	Answering questions, pictionary. pg. 3		2.	Write a letter. pg. 8a	
3.	Pictionary. pg. 3a		3.	Plan a hair setting demonstration. pg. 9	
4.	Reading, listening to tape. pg. 4				
5.	Worksheet. pg. 4a				
6.	Pictionary, listening to tape. pg. 5				
7.	Reading, answering questions. pg. 6				
8.	Reading, worksheet. pg. 7				
Requirements					
1.	Reading and worksheet. pp. 10&10a		1.	Write a paragraph. pg. 11a	
2.	Reading, worksheet. pg. 11		2.	Listing beauty schools. pg. 12	
Conditions					
1.	Reading, listing reasons. pg. 13		1.	Reading, listening to tape. pg. 14	
2.	Reading, worksheet. pg. 13a				
Advantages					
1.	Reading, worksheet. pg. 15		1.	Crossword puzzle. pg. 16	
2.	Reading, worksheet. pg. 15a		2.	Unscrambling sentences. pg. 17	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

HARD COVER BOOK INVENTORY

Please put books in trunk in this order

1. I Want to Be a Nurse
2. I Want to Be a Bus Driver
3. I Want to Be a Sales Clerk
4. I Want to Be a Forester
5. I Want to Be a Taxi Driver
6. I Want to Be a Dentist
7. I Want to Be a Doctor
8. I Want to Be a Dairy Farmer
9. I Want to Be a Animal Doctor
10. I Want to Be a Zoo Keeper
11. I Want to Be a Postman
12. I Want to Be a Telephone Operator
13. I Want to Be a Secretary
14. Cargoes
15. Wonderful World of Transportation
16. About Men at Work
17. About Policemen
18. About Farm Helpers
19. About Policemen Around the World
20. About Captain of a Ship
21. About Jerry, Jimmy and the Pharmacist
22. About School Helpers
23. About Postmen
24. About Foresters
25. About News and How It Travels
26. I Know a Garagemen
27. I Know a Fireman
28. I Know a Policeman
29. House Builder
30. Librarian
31. I Know a Nurse
32. Read About the Busman
33. Read About the Postman
34. Read About the Fireman
35. Read About the Policeman
36. Lets Find Out About the Fireman
37. Lets Find Out About the Clinic
38. Lets Find Out About the Farms
39. At the Pet Hospital
40. At the Railroad Station
41. At the Post Office
42. Lets Go to a Garage
43. Lets Go to a Dentist
44. Lets Go to a Hospital
45. Lets Go to a Firehouse
46. Lets Go to a Post Office
47. Lets Go to a Newspaper
48. Lets Go to Watch a Building Go Up
49. How We Get Our Dairy Foods
50. How We Get Our Mail
51. How We Get Our Clothing

HARD COVER BOOK INVENTORY

52. Come to Work With Us in House Construction
53. Come to Work With Us in Airport
54. Come to Work With Us in Hospital
55. City Visits - City Workers
56. Big City Workers
57. The First Book of Hospitals
58. The First Book of Firemen
59. The First Book of Lumbering
60. The True Book of Policeman and Firemen
61. The True Book of Post Office
62. The True Book of Conservation
63. You Visit a Dairy - Clothing Factory
64. You Visit a Newspaper - TV Station
65. Nurses and What They Do
66. Engineers and What They Do
67. Doctors and What They Do
68. Foresters and What They Do
69. Forest Fire Fighters and What They Do
70. Automobiles - How They Work
71. Timber
72. Hot Rod Thunder
73. Weather Instruments - How They Work
74. Lets Find Out About Clothes
75. About Ready to Wear Clothes
76. Airplanes How They Work

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

BOX I

Please put filmstrips back in box in this order.

1. Job Opportunities in a Restaurant
2. Preparing News for Print
3. The Finished Newspaper
4. Working With Cars
5. Transportation and Transportation Workers
6. The Automobile Service Station
7. Fixing a Flat Tire
8. The Gas Station Attendant
9. Office Workers
10. The Post Office and Postal Workers
11. Fire Protection in Big City
12. Fire and Fire Fighters
13. Police and Police Protection
14. Police Protection in Big City
15. School Workers
16. Education in Big City
17. Education and the Teacher
18. The Library and the Librarian
19. The Waitress
20. Manufacturing Clothing
21. Care of Animals

BOX II

22. Just a Secretary
23. Job Opportunities in a Department Store
24. Would You Like Hospital Work
25. The Neighborhood Nurse
26. Hospital Workers
27. Registered Nurses - Qualifications and Education
28. Dental Hygienist
29. Licensed Practical Nurse
30. Registered Nurses - Types of Jobs and Opportunities
31. Nursing Assistant
32. The Neighborhood Doctor

Filmstrip Inventory (cont'd)

BOX III

33. The Story of Building a House - How It Started
34. " " " " " " - Excavating the Cellar
35. " " " " " " - Building the Foundation
36. " " " " " " - Building the Frame of the House
37. " " " " " " - Gas, Electric, Plumbing and Other Installations
38. " " " " " " - Further Installations
39 " " " " " " - Completing Outside of House
40. " " " " " " - Completing the Inside of the House
41. " " " " " " - The House is Built
42. Heavy Equipment Operators

BOX IV

43. Forest and Forest Products - The Redwood Lumber Industry: The Lumber Mill
44. " " " " - Redwood Industry: Planning Mill
45. " " " " - The Plywood Industry
46. " " " " - Paper Industry: Trees in Forest
47. " " " " - The Paper Industry: The Paper Mill
48. Airport Workers

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Telephone Workers — Folder Inventory

SRA Briefs

Linemen
Service Representatives for Telephone Companies
Telephone Installer
Telephone Operator

Career Briefs

Telphone Linemen and Cable Splicers (B-47)

Career Summaries

Telephone Installers (S-147)
Telephone Operator (S-39)

D.O.T. Cards

Telephone Central Office Installer	(#102)
Telephone Central Office Operator	(#103)
Telephone Central Office Repairman	(#104)
Telephone Equipment Man	(#105)
Telephone Lineman	(#108)

U.S. Government Employment Outlook Booklet

Telephone Operators-Industry

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

People Who Work With Animals

Folder Inventory

SRA Briefs

Animal Keepers
Dairy Farmers
Fur Farmers
Oceanographers
Poultrymen
Veterinarians

Career Summaries

Dairy Farmer (S-75)
Poultry Farmer (S-113)

Green D.O.T. Cards

Veterinarian	(#394)
Zoo Director	(#399)
Zoologist	(#400)

Job Guide

Animal Keeper (G-16)

Pamphlets

How to Live with a Neurotic Dog
Protecting Your Pet
Today's Veterinarian
What the Veterinarian Does

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers in House Construction

Folder Inventory

SRA Briefs

Finding Out About:
- Architect
- Carpenter
- Plumber
- Surveyors

D.O.T. Cards

Laborer	#55
Surveyor	#97
Draftsman	#129
Carpenter	#142
Electrician	#158
Glazier	#168
Plasterer	#180
Painter	#196
Plumber	#204
Architect	#254

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Health Careers

SRA Briefs
Dental Assistants
Dental Hygienists
Dental Technicians
Dentists
Drug Manufacturing Workers
Industrial Hygienists
Licensed Practical Nurses
Medical Assistants
Pharmacists
Public Health Nurses
Registered Professional Nurses

U.S. Government Employment Outlooks:
Dentists
Hospital Attendants
Licensed Practical Nurses
Registered Nurses

Folder Inventory

Career Brief
Registered Nurse B-75

Career Summaries(in Hospital Folder)
Nurse, Public Health S-8
Nurse, Man S-60
Nurse Anesthetist S-65
Nurse Aide S-94

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Postal Careers

SRA Briefs
Postal Clerks
Letter Carriers
Sorter Sorter

U.S. Government Employment Outlook
Post Office Occupations

Folder Inventory

D.O.T. Cards
Postal Clerks #73
Mail Carrier #58

GUIDED OCCUPATIONAL OPIEINTATION
Syracuse City School District

School Workers.

Folder Inventory

SRA Briefs

Finding Out About:
Art Teachres
Athletic Coaches
Children's Librarians
Guidance Counselors
Kindergarten and Nursery School Teachers
Librarians
Physical Education Teachres
School Principals
Teachers
Teacher Aides
Teachers of Exceptional Children

D.O.T. Cards

Athletic Coach
Athletic Trainer
Janitor
Teacher, Kindergarten
Librarian
Physical Education Teacher
Psychologist
School Counselor
Social Worker
Teacher, Elementary School
Teacher, Secondary School
Teacher, Special Education

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers in Heavy Construction

Folder Inventory

SRA Briefs

Finding Out About:
Architects
Bricklayers
Carpenters
Construction Laborers
Draftsmen
Electricians
Plumbers
Survevors

D.O.T. Cards

Architectural Draftsman (#129)
Carpenter (142)
Civil Engineer (279)
Glazier(#168)
Laborer, Construction (#55)
Survey Man (#97)

D.O.T. Cartoons

Carpenter
Painter

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Restaurant Careers

Folder Inventory

SRA Briefs

Busboys
Cashiers
Caterers
Cooks and Chefs
Dietitians
Restaurant Managers
Short-Order Cook
Waiters and Waitresses

Career Briefs

Cooks and Chefs
Restaurant Hostess
Waiter-Waitress

Career Summaries

Busboy-Busgirl
Car Hop
Cashier
Cook-Short Order
Counterman, Countergirl - Cafeteria
Dishwasher

D.O.T. Cards

Restaurant Manager
Waiter/Waitress

D.O.T. Cartoons

Bus Boy (Girl)
Cashier-Checker
Cocktail Waitress
Cook
Waitress- Combination Girl

U.S. Government Occupational Outlook Handbook

Dietitians
Restaurant

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Police Careers

Folder Inventory

SRA Briefs

Finding Out About:
Detectives
F.B.I. Agents
Policemen
Policewomen

D.O.T. Cards

F.B.I. Agent
Policeman

D.O.T. Cartoons

Policeman
Police Trainee
Policewoman

U.S. Government Occupational Outlook Handbook

F.B.I. Agent
Police Officers and State Police Officers; 1970-71

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Airport Workers

Folder Inventory

SRA Briefs

Finding Out About:

Aerospace Engineers
Airline Dispatchers
Airline Pilots
Airline Reservationists
Airline Stewardesses
Airplane Ground Servicemen
Airplane Mechanics
Airport Managers
Air Traffic Controllers
Flight Engineers
Helicopter Pilots
Travel Agents

Job Guide

Baggage Handler G-20

D.O.T. Cards

Airline Ticket Agent (#111)
Air Traffic Controller (#125)
Airplane Mechanic (#126)
Stewardess (#225)
Flight Engineer (#239)
Airline Pilot (#251)

Career Briefs

Airling Clerical Jobs B-43P
Airforce Careers B-139

Career Summaries

Aeronautical Engineer Technician S-125
Aircraft Assemblyman S-173
Airline Ticket Agent S-191
Airport Superintendent S-227
Aeronautical Draftsamn S-228

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Store Workers

Folder Inventory

SRA Briefs

Comparison Shopper
Interior Designers
Manufacturers Representative
Shoe Salesman
Watch Repairman

Job Guide

Music Store Clerk

Career Summaries

Salesperson (retail) S-142
Stock Clerk - S-83)

D.O.T. Cartoon

Stock Clerk

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Fashion and Clothing Careers

Folder Inventory

SRA Briefs

Clothing Store People
Dressmakers
Fashion Designers
Furriers
Garment Cutters
Milliners
Models
Store Buyers
Tailors

Career Briefs

Sewing Machine Operator
Tailor

Career Summaries

Dressmaker
Furrier
Garment Cutter
Hand Sewer (Garment)
Presser, Women's Garments

D.O.T. Cards

Seamstress
Sewing Machine Operator

D.O.T. Cartoon

Sewing Machine Operator

U.S. Government Occupational Outlook Handbook
Employment Outlook in the Apparel Industry

Reprint from New Book of Knowledge (Volume 6)

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Firefighters

Folder Inventory

SRA Brief
Firemen

Career Summary
Firefighter (s057)

U.S. Government Occupational Outlook Handbook
Firefighters

Soft Cover Book:
Meig's Tower

D.O.T. Card
Firemen (#37)

GYIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Auto Workers

Folder Inventory

SRA Briefs

Finding Out About:

Automobile Body Repairman
Automobile Manufacturing Workers
Automobile Mechanics
Aytomobile Parts Salesmen
Service Station Managers

Career Briefs

Automobile Mechanic

Career Summaries

Automobile Body Repairman
Auto Mechanic Helper
Automobile - Body Designer
Automobile Washer
Automotive Brakeman
Salesman, Automobile
Truck and Bus Mechanic

D.O.T. Cards

Automobile Body Repairman
Automobile Mechanics

U.S. Government Occupational Outlook Handbook:

Automobile Salesman;1970-71
Motor Vehicles and Equipment
Manufacturing; 1970-71

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Conservation Careers

Folder Inventory

SRA Briefs

Finding Out About:

Forestry Technicians
Foresters
Lumberjacks
Papermaking Production Workers
Soil Conservationists

D.O.T. Cards

Tree Surgeon #113
Forester #296
Parks Director #339
Soil Conservationist #378
Wildlife Manager #396

Career Summaries

Faller (Logger, Lumberjack)
Forest Technician (Aide)
Tree Surgeon

U.S. Government Occupational Outlook Handbook:

Conservation Occupations

Catalogue of New York State Ranger School at Wanakena

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Hospital Careers

SRA Briefs
Occupational Therapist
Medical Illustrator
Anesthetist
Medical Social Workers
LPN
Hospital Attendant
Surgeons

Career Briefs
Nurse, Registered B-75
Physician B-60

Career Summary Cards
Nurse Anethetist S-65
Nurse Aide S-94
Nurse (Man) S-60
Nurse - Public Health S-8
Medical Social Worker S-42
Orderly S-332

Folder Inventory

D.O.T. Cards
General Hospital Aide #41
Pharmacy Aide #69
Dietitian #286
Physical Medicine Aide #70
Nurse's Aide #65
X-ray Aide #122
Licensed Practical Nurse #182
Nurse, Head #334
Physician #345

D.O.T. Cartoons
LPN
Physical Therapy Attendant
Nurse Aide

Soft Cover Book
You Can Work in the Health Services

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Office Careers

SRA Briefs
File Clerk
Legal Secretaries
Office Boys and Messengers
Office Machine Operators
Secretaries
Typists and Stenographers

Folder Inventory

Career Briefs
Male Secretary
Secretary

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers in Transportation

Folder Inventory

SRA Briefs

Automatic Vending Routemen
Local Bus Drivers
Long-Distance Bus Drivers
Long-Distance Truck Drivers
Power Truck Drivers
Routemen
Shipping Clerks
Taxi Drivers
Traffic Engineers
Traffic Managers

Career Summaries

Busdrivers
Driver, Heavy-Truck
Industrial- Truck Operator
Rigger
Route Salesman
Taxi Driver

D.O.T. Cards

Ticket Agent, Transportation
Traffic Manager
Truck Driver

Pamphlets

Dietz, Betty Warner; You Can Work in the Transportation Industry; John Day Co.; 1969

New York Telephone Directory; Syracuse Telephone Directory; 1971

United States Department of Labor; Employment Outlook Driving Occupatic

Map of Syracuse, New York

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Newspaper Careers

Folder Inventory

SRA Briefs

Compositor
Editorial Assistants
Foreign Correspondents
News Cameramen
News Photographers
Newspaper Editors
Newspaper Reporters
Newsstand Vendors
Office boys and Messengers
Office Machine Operators
Printing Pressman

Job Guide

Offset Pressman Helper #G-17

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Cosmetology

Brown Folder Inventory

SRA Brief
Beauticians

Career Brief
Cosmetologist (B-38)

Career Summary
Manicurist

Job Guide
Manicurist (G-2)

D.O.T. Cartoon
Cosmetologist, A Beauty Operator

State of New York, Dept. of State
Do You Plan to Be a Hairdresser?

Clairol
Careers in Beauty

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

TV and Radio Careers

Brown Folder Inventory

SRA Briefs
Broadcast Technician
Disk Jockeys
Radio and Television Announcers
Radio-TV Salesmen
Receptionist
Special Effects Technician

D.O.T. Cards
#82 Receptionist
#214 Radio and Television Announcer
#215 Radio or Television Broadcast Technician
#362 Radio and Television Program Producer-Director

Career Summary
B-116 Radio and Television Technician

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers In Transportation	Cassette Tape Inventory
Traffic Engineers	Power Truck Drivers
Traffic Managers	Local Bus Drivers
Automatic Vending Machine Routemen	Story: Michael Mead
Taxi Drivers	
Long Distance Truck Drivers	Transportation 603T - 2
Long Distance Bus Drivers	Transportation 603T - 2
Routemen	A Mans Work: Shipping and Receiving Clerk
Shipping Clerks	A Mans Work: Taxi Driver

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers In House Construction	Cassette Tape Inventory
Architects	
Draftsmen	
Electricians	
Bricklayers	
Carpenters	
Plumbers	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Fashion and Clothing Careers

Cassette Tape Inventory

Garment Cutters
Clothing Store Salespeople

Tailors
Dressmakers

Furriers
Store Buyers

Models
Fashion Designers

Milliners

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Health Careers

Cassette Tape Inventory

Industrial Hygienists
Drug Manufacturing Workers

Dental Hygienists
Dental Technicians

Dentists
Dental Assistants

Medical Assistants
Pharmacists

Hospital Attendants
Registered Professional Nurses

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers In Heavy Construction

Cassette Tape Inventory

Construction Laborers
Bowmar: Architectural Draftsmen/Civil Engineers

Surveyors
Bowmar: Electrician/Heavy Equipment Operator

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Airport Workers

Airline Managers
Airline Dispatchers

Airline Pilots
Airline Reservationists

A Man's Work - Airline Ticket Agent
A Man's Work - Aircraft Fueler

Air Traffic Controllers
Airplane Ground Servicemen

Cassette Tape Inventory

Airline Stewardesses
Airline Mechanics

Aero Space Engineers
Travel Agents

Helicoptor Pilots
Flight Engineers

Tape to accompany filmstrip
"Airport Workers"

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

People Who Work With Animals

Oceanographers
(Soil Conservationists)

Dairy Farmers
Poultrymen

Animal Keepers
Veterinarians

Cassette Tape Inventory

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Post Office Workers

Postal Clerks
Letter Carriers

Cassette Tape Inventory

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Auto Workers

Flat Tire
(Waitress)

Gas Station

Automobile Mechanics
Automative Parts Salesman

Cassette Tape Inventory

Auto Manufacturing Workers
Auto Body Repairmen

Avid - Working With Cars
McGraw Hill - Gas Station Attendant

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

People Who Work In Conservation

(Oceanographer)
Soil Conservationists

Forestry Technicians
Lumberjacks

Cassette Tape Inventory

Foresters
Wildlife Managers

Tree Experts
Papermaking Product Workers

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Firefighters

Firemen
(Policewomen)

A Man's Work - Fireman
A Man's Work - (Policeman)

Casette Tape Inventory

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

TV and Radio Careers — Cassette Tape Inventory

SRA:
Broadcast Technician
Disk Jockeys

Radio and Television Announcers
Radio-TV Time Salesmen

Receptionist
Special Effects Technician

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Cosmetology — Cassette Tape Inventory

SRA:
Beautician
Hairdresser (Career Center Tape)

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Hospital Careers	Cassette Tape Inventory
Licensed Practical Nurses	Surgeons
Public Health Nurse	Hospital Attendants
Nurse Anesthetists	Book: I Know a Nurse
Medical Social Workers	SVE - Hospital Workers
Occupational Therapists	Story: Blue and Yellow Career Study
Medical Illustrators	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Newspaper Careers	Cassette Tape Inventory
Newspaper Editors	Advertising Copywriters
Newspaper Reporters	Offset Pressman Helper
Editorial Assistants	Preparing News for Print
News Cameramen	The Finished Newspaper
Compositors	Newsstand Vendors
Foreign Correspondents	Printing Pressman

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Police Careers	Cassette Tape Inventory
Policewoman	A Man's Work - Policeman
(Firemen)	A Man's Work -(Fireman)
Policemen	SRA - FBI Agents
Detectives	

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Syracuse City School District

School Workers

Kindergarten and Nursery School Workers
School Principals

Teachers of Execptional Children
Physical Education Teachers

Athletic Coaches
Art Teachers

Cassette Tape Inventory

Teachers
Guidance Counselors

Librarians
Childrens Librarians

SVE School Workers (filmstrip)
Teachers Aide Story

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Store Workers

Comparison Shopper
Interior Decorator

Shoe Salesmen
Watch Repairmen

Cassette Tape Inventory

Job Opportunities in a Department Store (filmstrip)

Career Summaries - Stock Clerk and Salesperson
Manufacturing Representative

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers in Office Work	Cassette Tape Inventory
Legal Secretaries	Office Workers (filmstrip)
Office Machine Operators	Just A Secretary (filmstrip)
Career Brief - Male Secretary	Office Boys and Messengers
Career Brief - Secretary	File Clerks
Typists and Stenographers	
Secretaries	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Careers in Restaurant Work	Cassette Tape Inventory
The Waitress	Career Brief , Cooks and Chefs
(Flat Tire)	Job Guides, Short Order Cook and Car Hop
Job Guide - Dishwasher	
Career Summary - Bus Boy	Bus Boys
	Hotel Managers
SRA Cooks and Chefs	
Caterers	Career Summary, Counterman-Countergirl (cafeteria)
Career Summary, Cashier	Career Brief B-71 - Restaurant Hostess
Career Brief, Waitress	
Short Order Cooks	Job Opportunities in a Restaurant (filmstrip)
Dietitians	

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Telephone Workers	Cassette Tape Inventory
Linemen	Telephone Installers
Telephone Operators	Service Representatives for the Telephone Company

CAREER CENTER FLOOR PLAN

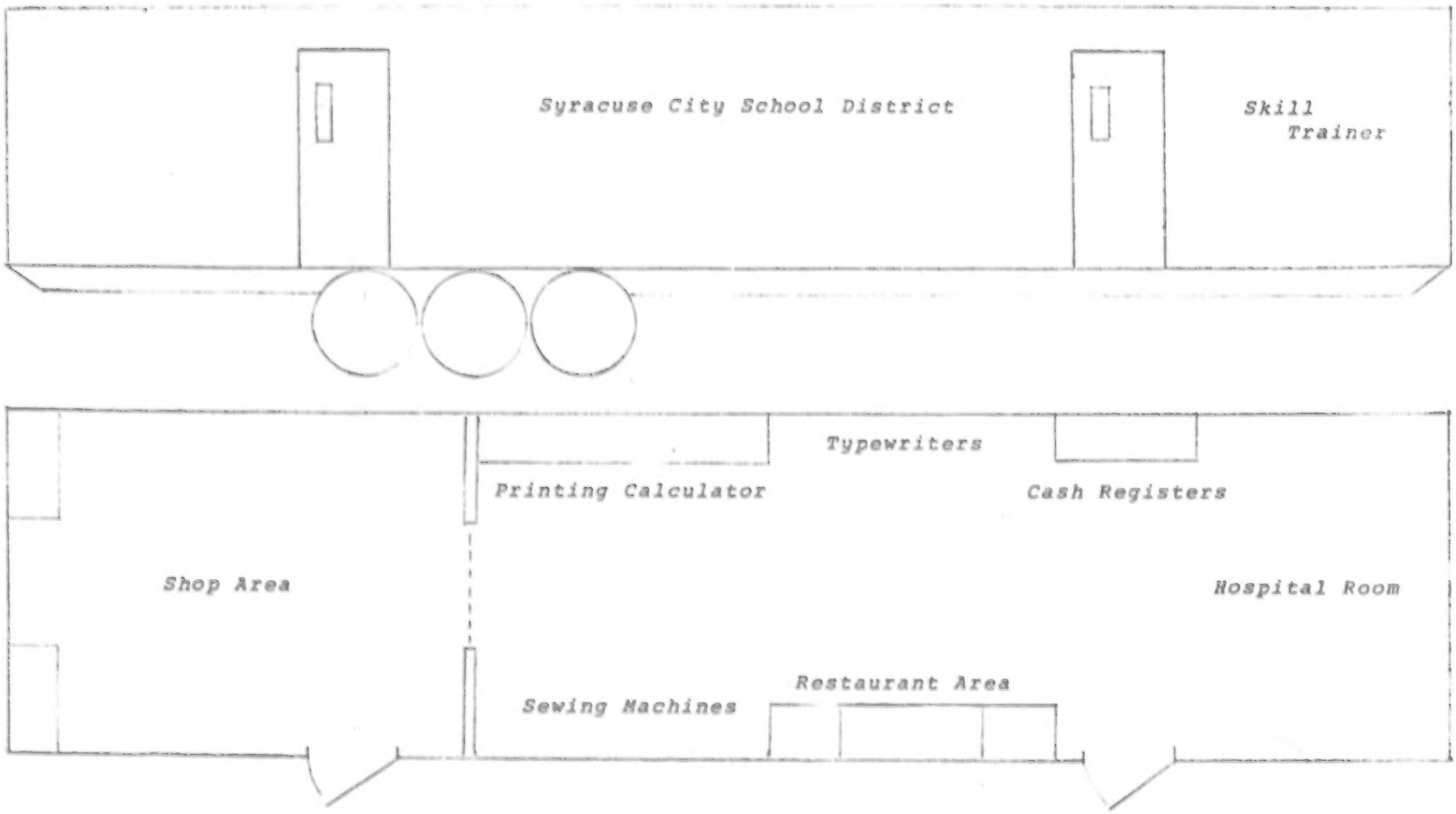
Career Center Display

Career Center Displays

Electronics

Construction

'Food Services

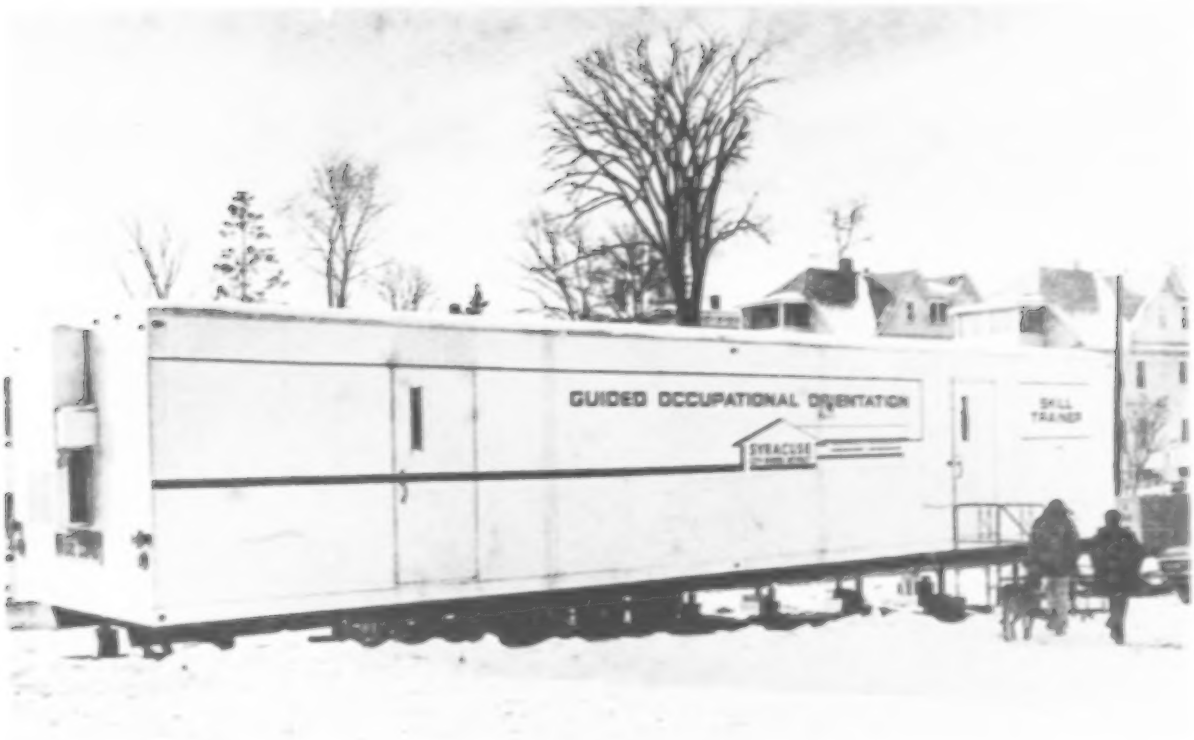


SKILL TRAINER VAN

12' X 8' X 50'

Capacity - 30 Students

Skill Trainer



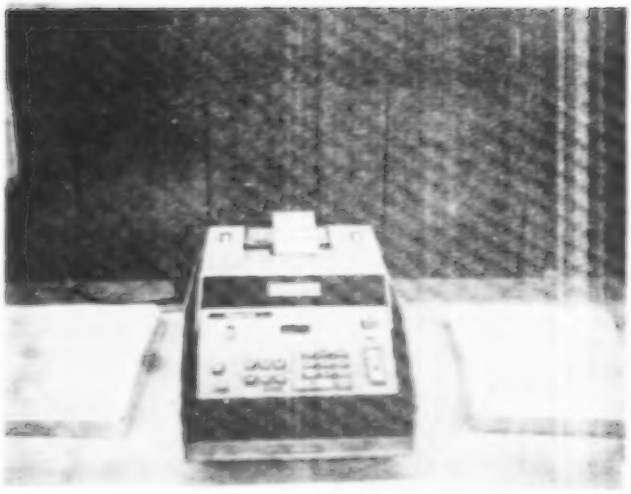
View From Rear

Interior

View From Front

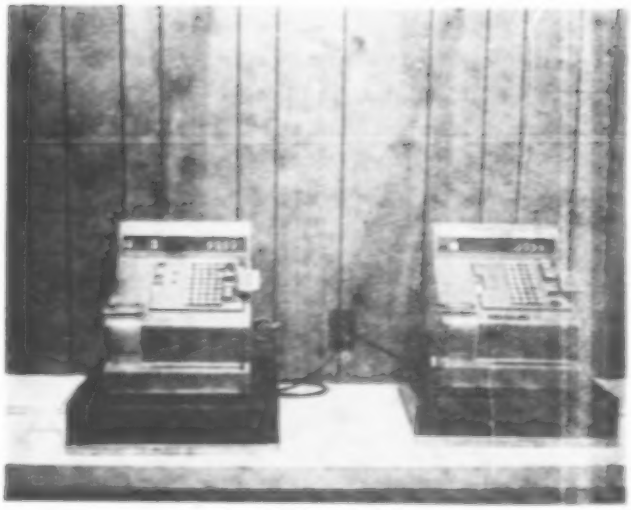
Skill Trainer Equipment

Restaurant Area

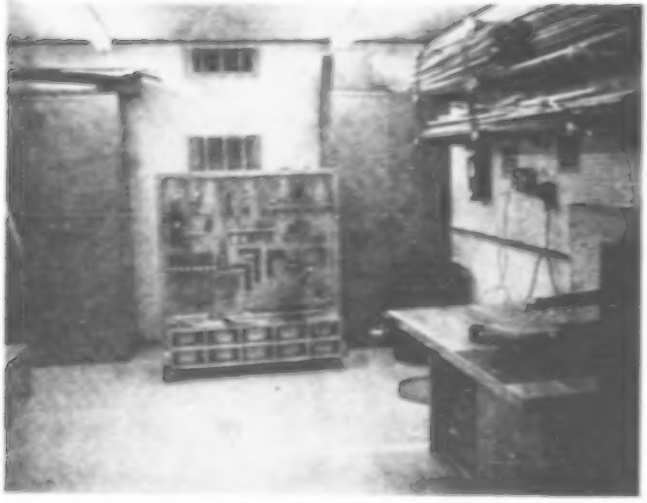


Printing Calculator

Hospital Area



Cash Registers



Shop Area

Selectric Typewriter

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Skill Trainer Van Movement Specifications

SUBJECT: Specifications to provide necessary and suitable men and equipment to relocate Skill Trainer Van.

1. Move a 12' x 54' Skill Trainer weighing approximately 14,000 pounds, equipment required to be heavy enough to fill all legal New York State requirements, and equipped with ball hitch, rear mount, and with necessary electrical wiring for proper lights and electric brake operation.

   Personnel shall be trained and proficient in unblocking and moving of units of the above described size, over various and narrow streets in the city of Syracuse, and must have knowledge of low underpasses and obstructions encountered en route. These personnel must be skilled in placing units of this type in tight locations and in blocking to the requirements of the Syracuse School District.

2. To provide an escort vehicle equipped with proper signs and safety devices and to be equipped to move a portable power plant mounted on a low-bed trailer weighing approximately 7,000 pounds, and equipped with the proper lighting and brake connections to operate same.

   Personnel operating escort vehicle must be familiar with requirements for escort duty and in moving loads of the above described size.

   This should pretty much cover your requirements as far as specifications of equipment and personnel are concerned. I have not included specifications for rate as this may be done either on an hourly basis or on a blanket move basis.

16

CITY SCHOOL DISTRICT
Syracuse, New York

EVALUATION OF WORKSHOP

We would like to assess how helpful you feel this workshop has been in preparing you to launch the new Elementary Occupation Orientation program in September.

Please respond to the questions below frankly. You do not need to sign your evaluation sheet if you do not wish to do so.

1. Please respond to the first series of questions by checking your response in the appropriate spot on the continuum. (Feel free to add any qualifying comments you wish.)

   1. To what degree did the workshop give you an understanding of the intent of the program?

67½%	30%	2½%	
Excellent	Good	Fair	Poor

   2. To what degree did the workshop succeed in making you familiar with all of the LAPs?

35%	45%	17½%	2½%
Excellent	Good	Fair	Poor

   3. To what degree did the workshop succeed in familiarizing you with the materials to be used in the LAPs?

40%	45%	12½%	2½%
Excellent	Good	Fair	Poor

   4. To what degree did the workshop succeed in helping you to know how to organize your class for implementing an individualized program?

15%	67½%	17½%	
Excellent	Good	Fair	Poor

5. How well has the workshop helped you to see how this program fits into the total curriculum picture?

47½%	32½%	20%	
Excellent	Good	Fair	Poor

6. How well did the workshop help you to plan how to keep records of individual pupil progress?

5%	47½%	42½%	5%
Excellent	Good	Fair	Poor

7. To what degree did the workshop help you to see the articulation between the skill van and the social studies, science and math curriculum (i.e. to what extent could you utilize the manipulative devices made in the skill van in your regular classroom?)

27½%	42%	12%	27½%
Excellent	Good	Fair	Poor

8. How well prepared do you feel you are to handle this program as a result of the workshop?

12%	67½%	17½%	2½%
Excellent	Good	Fair	Poor

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Individualized Career Study Order

School _____ Teacher _____

Send this order to the Career Center at least 1 week in advance of your Career Center visit. (Each teacher should complete this ICS order form.)

INCLUDE: 1. Number of copies of each study needed.
2. Instructional level color
   a. Blue - below grade level (Be sure you have ordered
   b. Yellow - grade level enough.)
   c. Pink - above grade level

Individualized Career Studies	Number of Copies Blue	Yellow	Pink
1. Airport Workers			
2. People Who Work With Animals			
3. Auto Workers			
4. People Who Work in Conservation			
5. Cosmetology - avail. Jan. 1972			
6. Fashion and Clothing Careers			
7. Firefighters			
8. Health Careers			
9. Careers in Heavy Construction			
10. Careers in House Construction			
11. Hospital Careers			
12. Newspaper Careers			
13. Careers in Office Work			
14. Police Careers			
15. Post Office Workers			
16. Careers in Restaurant Work			
17. School Workers			
18. Store Workers			
19. Telephone Workers - yellow and pink only			
20. Careers in Television and Radio available January, 1972			
21. Careers in Transportation			

CAREERS UNLIMITED!!!
ENGLISH
SOCIAL STUDIES
MATHEMATICS
SCIENCE
1444

CAREERS UNLIMITED

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Syracuse City School District

Syracuse, New York

Guided Occupational Orientation
Program

To evaluate oneself

a. Complete a personal inventory.
b. Complete a self - evaluation.
c. Write a composition on likes, dislikes, abilities, talents.
d. Make a list of things you like to do.
e. Make a list of things you don't like to do.
f. Ask someone to write a paragraph telling you about what they think you do well / don't do well.
g. Ask a teacher (or teachers) what they think is your most outstanding character feature.
h. Compare what teacher (s), and/or classmates have said about you.
i. Ask an adult (or friend) to write you a character reference.
j. Tell what you think is your best characteristic (appearance excluded) and why.
k. Demonstrate a talent that you have in a class talent show.
l. Write a class news sheet describing accomplishment of each member of class.
m. Write a class brag sheet where each member writes a brag about himself

General Job Skills - 2

To evaluate oneself in terms of a job.

a. Make a list of jobs that you would like to do in the future.

b. Make a list of duties that you do daily.

c. Pick a job that interests you and research it: salary, flexibility, requirements, training, etc.

d. Write a composition on what you hope to do in the future

e. Evaluate another student in terms of attitude, work habits, skills, co-operation, etc.

f. Ask someone to evaluate you as a worker.

g. List the characteristics of a good worker

h. List the characteristics of a poor worker.

i. Compare your work habits to a list of good work habits and poor work habits.

j. Discuss the similarities of a good worker and a good student

k. Write an advertisement advertising your skills and abilities.

l. Compare a good worker with a poor worker and come up with a list of do's and don'ts.

m. Pick a job you are interested in and compare yourself an your abilities to the standards set forth by the job.

General Job Skills - 3

Evaluate oneself in terms of a job.

n. Prepare a resumé (profile) of yourself stating your abilities and accomplishments and why you think you should be given the job of your choice.

o. Given a job description and three resumés, pick the applicant best suited for the job .

To prepare oneself for a job or career.

a. Examine the job of your choice and make a list of things you would have to do to get the job.

b. Make a list of school subjects you would have to study to get job.

c. Write a paragraph about what you will have to do to be what you want.

d. Make a list of work habits you could develop at school that would (might) help you on the job.

e. Interview your guidance counselor. Tell him about the career of your choice and have him help you plan a course of study.

f. Investigate out-of-school possibilities about part time or apprentice work in the job area of your choice.

g. Interview someone who has the job you're interested in. Get them to tell you how they got the job, their duties, and whether they enjoy it?

h. Examine the four major subject areas and list what jobs they help prepare you for.

i. Examine the minor subject - art, home economics, business, shop, gym, music - and tell what jobs they help prepare you for.

j. given 2-3 jobs investigate them and list skills necessary to do each job.

k. List skills (if any) that are common to most jobs

l. Show a film(s) on various occupations and list skills needed, training required, and duties performed.

General Job Skills - 5

List ways and places to look for a job.

a. List five places where you can look for a job.

b. Write a brief description of five places that find jobs for people.

c. Interview one of the following:
personnel manager, employment agency interviewer, member of chamber of commerce, N.Y. State employment interviewer, - about how to go about applying for a job.

d. Match a list of abbreviations used in classified ads with their meanings.

e. Fill out a job application form.

f. Given a list of (ten) abbreviations found in the classified section of the newspaper write their meanings

g. Prepare a class classified section advertizing eg. jobs wanted - help wanted.

h. Write a business letter applying for a job (stating your qualifications).

i. Select an agency to investigate and report back to the class.

j. Write an advertisement in the style found in the classified section of the newspaper.

k. Interview someone who has a job and report on how they looked for and found a job.

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List ways and places to look for a job.

l. Present a strategy on how you would go about looking for a job.

m. Prepare a bulletin board that displays ways and places of finding jobs.

n. Get a member of Chamber of Commerce to talk to the class and tell how to go about getting jobs.

o. Take a field trip to the N.Y. State Employment service.

p. Take a sample I.Q. test.

q. Take a sample aptitude test

r. Do some sample questions from a civil service exam.

General Job Skills - 7

Outlline methods on how to prepare for and be interviewed

a. Define what an interview is.

b. Read through a prepared interview script with another classmate.

c. Listen to a taped interview and prepare a list of questions that you think you would need to know answers to during an interview.

d. Look at filmstrip dealing with job interviews.

e. Given a check list, listen to two taped interviews. Decide who gets the job.

f. Compare an interview with an audition.

g. Write a paragraph on WHAT TO WEAR TO AN INTERVIEW.

h. Using a checklist discuss what one should wear, look like and act like during an interview.

i. Given a job description, construct sample interview questions.

j. Interview a classmate on what kind of job he wants and why.

k. Survey people who have jobs and ask them what they think is the most important think to do and not to do during an interview.

Understand work etiquette

b. Given job description(s) and five pictures of clothing select correct dress for job.

c. Prepare a bulletin board - showing jobs and clothing that go with them.

d. Fill out a HOW WELL DO YOU GET ALONG WITH OTHERS form.

e. Select three people in your class that you would like to work with and tell why.

f. List the qualities you think are important in getting along with others.

g. Set up a model office and assign each member a duty. List the consequences of any one of these workers not doing his job.

h. Discuss the results of "bossing", "over-doing","under-doing".

i. Interview an employer(s) and ask him/her what an employee would have to do to get fired.

j. Prepare a report on how to lose a job.

k. Given a profile of two employees, only one of which you the employer can afford to keep. Pick one and list why.

l. Take a field trip to an office, building, plant,etc. and report on how people need to work together to get the job done.

m. Interview an employer and question him on how he gets his employees to work together - and on problems he encounters.

n. Have an employer speak to the class on "work etiquette".

General Job Skills -9

Understanding job terminology.

a. Construct a job vocabulary tree.

b. List words you encounter in reading about jobs that you are unfamiliar with.

c. Given a list of "job" words - match them with their meanings.

d. Make a list of words (job) that you think are essential in the world of work.

e. Define a list of job terms.

f. Keep a class file where class members write down and define job terms they have encountered.

MONEY - FINANCE

To show that you can identify and explain deductions on a paycheck gross to net.

1. Determine the difference between gross pay and net pay.
2. Using a paycheck, learn about payroll deductions income taxes, FICA, etc.
3. Using a paycheck another member of the class has made up, show that you understand the deductions.
4. Using a paycheck from another member of the class or your teacher, show that you understand how the net pay was figured.

To demonstrate the mastery of tax forms by properly filling in Federal and State Income Tax Forms.

1. Given federal and state tax (long and short forms) discuss vocabulary in forms.
2. Fill in short and long forms with hypothetical figures.
3. Study forms from previous years to show changes over the years.
4. Have a group discussion to identify weaknesses and difficulties in present forms.
5. Arrange field trips to local tax bureaus to become aware of local agencies.
6. One student can give another student a hypothetical set of figures from which he is to fill out a tax form.

MONEY-FINANCE - 2

To show that you can estimate the cost of education for preparing for certain jobs.

1. Choose various vocations such as teaching, medical, secretarial etc. and figure out cost for preparation.
2. Write to various colleges for cost of tuition, room and board, etc.
3. Name at least four jobs for which apprenticeships are available. What is an apprenticeship? How much does an apprenticeship cost the apprentice?
4. Explore the apprenticeship programs of Central Tech High. What benefits do these programs give? Make a report on your findings.

Demonstrate by use of a budget that you can spend money properly.

1. Keep a daily budget from real or make-believe allowance with expenditures.
2. List reasons why people spend beyond their budget.
3. Assume you earn a net salary of $600/month. Show how you would spend this money over a month.
4. With several other students, form a hypothetical family, and list what expenses the family has in a month.
5. Find out how your parents or other adult wage earners spend their earnings - Report on your findings.
6. Explain what a family could do if it finds that it runs out of money every month before the month is over.

MONEY - FINANCE - 3

Develop an understanding that credit buying is advantageous if paid within a specified time limit.

1. Learn to compute interest charges on revolving charge accounts
2. List the advantages and disadvantages of having credit accounts.
3. List the reasons why people like to use credit accounts.
4. Select an item, such as a refrigerator or television, and determine the actual cost if payments are made in 30 days; one year; 5 years.
5. Call the Better Business Bureau and research their booklets on credit buying. Based on this information, write a dittoed list of do's and dont's for your class.
6. Interview several adults to get their advice on credit buying. Make sure several are elderly people - over 65-70 years .

Demonstrate that with a make believe investment you can buy and sell stock to show you have an understanding of the stock market.

1. Make a list of terms from the newspaper stock market reports, and show that you understand them.
2. Choose stock from newspaper to buy and sell.
3. Keep a daily record to show how your stock is progressing
4. Prepare field trips or interviews with local stock firms.
5. List reasons why the market may fluctuate (bear - bull market)
6. Explain who should buy stock and why.

MONEY-FINANCE - 4

Show that extra fringe benefits may sometimes be better than a larger salary.

1. Explain what is meant by fringe benefits.
2. List fringe benefits that you are familiar with now.
3. Discuss and list new benefits that you think should be included as fringe benefits today.

To demonstrate that you can differentiate between fringe benefits and non-fringe benefits.

1. Given a paycheck form, students identify fringe benefits.
2. List and discuss other fringe benefits that may not appear on check.
3. Discuss the importance of fringe benefits in job choice.
4. Check with several people to find out the value of fringe benefits they receive on their jobs.
5. Explain how one person might be getting a lower wage per hour than another, yet still earning more because of his fringe benefits.

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MONEY-FINANCE - 5

To demonstrate a knowledge between strikes and layoffs.

1. Define the terms "strikes" and "layoffs".
2. List the various reasons for "layoffs" and "strikes".
3. Discuss and list various ways to overcome or limit strikes and layoffs.
4. Prepare bulletin board with material from current strikes and layoffs.
5. Interview several workers about their opinions on strikes or layoffs? Are their opinions valid?

To prove that your job is worth the effort.

1. Itemize a list of the social needs that are met by your job.
2. Write a list of financial needs that are met by your job.
3. Determine if education was too little or too demanding for your present job.

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MONEY-FINANCE - 6

To show an understanding of the protection offered by employment insurance.

1. Do research on origin of unemployment insurance.
2. Itemize the advantages and disadvantages of unemployment insurance.
3. Write about ways to improve unemployment insurance.
4. Who is entitled to unemployment insurance?
5. Call the N.Y. State Employment Services for printed material on unemployment insurance for a bulletin board.
6. Some people feel that unemployment insurance is the same as Welfare. Write a comparitive paragraph comparing and contrasting the two.

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To show an understanding of the strengths and weaknesses of government protection.

1. Do research on various governmental protective measures (Federal banks, maximum interest charge, stock market regulations etc.).
2. Write compositions on why or why not federal government should be involved in protective and restrictive measures for public and private enterprise.
3. List the dangers of too much government control.
4. Determine from the library and N.Y.S.E.S. various types of government protection and report on your findings.

MONEY-FINANCE - 7

To understand the factors to be considered in job transfers to different areas.

1. List benefits that may be lost if worker doesn't transfer to another area with his firm (pension rights, insurance benefits,etc.)
2. Evaluate local openings in your occupation if you decide not to transfer.
3. Write about the problems that may arise for members of your family to adapt to a new location.
4. Make a list of jobs that have a high chance of transfer. A low chance.
5. Make a list of jobs where people are self-employed and can determine their own locations.

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To manifest an understanding of what is meant by the term "moonlighting"

1. Discuss what is meant by the term "moonlighting".
2. List occupations that have restrictions on moonlighting (firemen, policemen, etc.)
3. Write about people you know who are "moonlighting".
4. List advantages and disadvantages of "moonlighting".

MONEY - FINANCE - 8

To demonstrate the importance of paying yourself first.

1. Have a class discussion on benefits of paying yourself first (savings account for a rainy day, saving for a college education, etc.)
2. List the reasons why it is important to discipline yourself to save.
3. Write compositions about people who live beyond their means.

To develop an ability to assess your present job.

1. A class discussion of why people should not remain in their present jobs if they are dissatisfied.
2. List measures to be taken to prepare for jobs in other fields
3. Write paragraphs about people you know who are dissatisfied with their jobs.
4. List reasons why people continue to stay in jobs that give them little satisfaction.

MONEY-FINANCE - 9

To demonstrate by use of statistics where your tax dollars go.

1. Do research on local tax dollar disbursement.
2. Discuss if our local tax dollar is being spent properly.
3. Examine state and federal tax disbursement.
4. Prepare bulletin board in sections denoting local, state and federal use of tax money.

To demonstrate an understanding of local and state welfare plans.

1. Do research on New York State Welfare Acts.
2. Interview personnel at local welfare agencies.
3. Discuss what should be the role of the Federal Government concerning welfare.
4. List the strengths and weaknesses of welfare aid.
5. Estimate the cost of welfare aid for a family of six.
6. Hold a debate between a person who doesn't like welfare and one who does.
7. Interview a caseworker with the Department of Social Services to get his or her views on welfare.

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MONEY-FINANCE - 10

To show that paper routes and part time jobs are important for preparation for future vocations.

1. Have class list the part time jobs that are available after school and during summer vacation.
2. Write a list of benefits to be derived from a part time job.
3. Write compositions in class to show the possible effect that part time jobs may have for future vocations.
4. Prepare bulletin board of various jobs held by present class.

To understand the need for and the benefits derived from our Social Security System.

1. Write a list of reasons why the Social Security Act was enacted.
2. Have each member of the class apply for a social security number.
3. List the advantages and disadvantages of the Social Security System.

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JOB REALITIES - PART I - EMPLOYEES EXPECTATIONS

To Evaluate oneself in terms of a given job.

a. Make a list of your accomplishments.

b. Make a list of your qualifications.

c. Make a list of things you do well.

d. Make a list of things you do for hobbies (sports, projects, interests).

e. Ask three people you know to write a letter about your character. (teacher, counselor, adult, minister)

f. Take an aptitude test.

g. Given a job description(s), list your personal likes and dislikes to the duties.

h. Write a paragraph telling why you would be a good choice for a given job.

i. Given a job you cannot do or do not like to do, explain why you are a poor choice for the job.

j. Go to the N.Y. State Employment service and let an interviewer interview you.

k. Ask someone you have worked for to rate you as an employee.

l. Ask your teacher to rate you as an employee.

m. Ask your parent to rate you as an employee (if you work around the house).

Job Realities Part I
Employee Expectations - 2

To outline methods of finding jobs to suit individual differences and personalities.

a. Describe, draw, list the kind of job(s) you would be miserable doing.

b. Given (five) jobs. List one essential character trait (e.g. patience) you would have to have to do that job.

c. Make a collage that shows some important character traits (e.g. listening well, patience, etc.)

d. Given a character description(s) and a job description(s) list reasons why person will be happy or unhappy doing this job.

e. Ask guidance counselor (teacher) to suggest some jobs he thinks you might excel in. List these.

f. Investigate a job that someone has suggested you might like to do and tell why or why not it would be a good choice.

g. List reasons why people fail at jobs. Compare these with another student, another group, etc..

h. Make a collage, or bulletin board showing people doing jobs they hate, or love.

i. List five things that you would do if you had to do a job you hated.

j. Outline a method that shows how to go about getting a job you would be content doing.

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Job Realities Part I
Employee Expections - 3

To outline the social needs of a job.

a. List five reasons why people work.

b. Write out some of the consequences of everyone in a city deciding not to work.

c. Write a report on two periods in history when people have been looked down upon for working.

d. Write a report on the social aspects of woman working forty or fifty years ago.

e. Discuss in a group, or by a panel Why People Should or Should not Work.

f. Explain in a paragraph/composition what might happen in a country where half the people could not find jobs.

g. Agree or disagree in a paragraph with the statement "People are happy doing nothing". Explain your reasons.

h. Survey woman between the ages of 20-70 and ask them
"Should woman work?"
"Should a woman hold a high political office?"
List results.

i. Survey people between the ages of 20-70 and ask "Why do people work?" List your results.

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Job Realities Part I
Employee Expectations - 4

To understand jobs available to a person in terms of age.

a. Call the N.Y.S. Employment Agency and find out the legal age that a person can start working.

b. See your guidance counselor and ask him how you can get "working papers".

c. List job you can hold at ages 8, 12, 14-16, 18-20, 25-40?

d. Given a job description(s) and three men of different ages but equal training choose one and tell your reasons for selecting him.

e. Discuss in a group the question SHOULD AGE MATTER IN JOB SELECTION. Record your findings.

f. Write a paragraph answering the question SHOULD PEOPLE BE FORCED TO RETIRE.

g. Discuss the reasons young people are not allowed to work until they are fourteen.

h. List the reasons "child labor" was made illegal.

i. List reasons why firms might have a legal retirement age.

j. Write a paragraph telling at what age you would like to start working, and why?

k. Given a job and three applicants with similar qualifications, one 20, one 38, and one 60, tell which one you would pick and why.

Job Realities PartI
Employee Expectations - 5

To understand the availability of job preference.

a. Prepare a collage (bulletin board) showing jobs that have become obsolete.

b. Pick a job that has become obsolete, describe it, tell why you might have liked/disliked doing this job.

c. List five jobs that you think might become obsolete in the future.

d. Write a paragraph on what would happen if machines took over.

e. Investigate the school office and list jobs you think might be phased out.

f. List five jobs, not in existence now, that might open up in the future.

g. Tell what you think might be the best job for you thirty years from now.

h. Given a job in the future list how you would best prepare yourself for the job.

i. Investigate (using the library, guidance counselor, etc.) the need for the kind of job you would like to do.

j. Write a "Who's Who" of the future assigning each member of your class with a job career.

k. Predict what ten people in your class will be doing in the future.

l. Given a career that you have been highly trained for and given the fact that you can no longer do this job, investigate what other jobs your training has prepared you to do. (you are a beautician and you develop an allergy to shampoos and dyed hair- What else can you do with your training?

m. Plan a field trip to a farm auction, and attempt to identify the tools - equipment and what they were used for.

Job Realities Part I
Employee Expectations - 6

To outline methods of

getting along with

others.

a. Given a situation, description of characters involved, read through the script (story) - listen to tape - and write two possible endings to the story.

b. Make a list of things that you do that might "bug" other people if you worked with them.

c. Make a list of things you hate for other people to do when you're working.

d. Make a collage showing the qualities of a good co-worker.

e. Define the terms "apple-polishing" "brown-nosing" and "yes man".

f. Write a paragraph describing some of the problems that might arise if you decide someone is "no good" before you got to know them.

g. List four classmates you would like to work with and give a reason for choosing each one.

h. List three ways you can go about solving a problem involving people who can't get along on the job.

i. Write a brochure describing your (office) and why it is such a pleasant place to work.

j. Select five people, do not name them, and tell why you could not work with them.

k. Ask one of these people (you could not work with) to write if they could/could not work with you and why.

l. Ask a person that is employed what his/her most difficult probelm(s) is in getting along with others. List them.

m. Ask a person that is employed "What kind of person causes the most problems on the job?" List these characteristics.

n. Given a job to be done by four people, choose the type of people you would select to do this job. Give your reasons why.

Job Realities Part I
Employee Expectations - 7

To outline methods of handling job frustration.

a. Write a paragraph describing the kind of person you would hate to work for.

b. List four qualities you would like your boss to have and why.

c. List four things you hate for your boss to do to you when your working.

d. Given unpleasant "on the job" situation(s) and a list of alternative behaviors, select one and explain why you picked it.

e. Write a script that shows a "confrontation" between "labor" and "management."

f. List five alternatives to "punching someone in the mouth"

g. List five things you would strike for if you were going to strike.

h. Explain the function of a "grievance committee".

I. List five reasons you would QUIT a job.

j. Discuss if it is better to quit a job, or be fired.

k. Write a paragraph listing your reasons for not hiring someone who had quit 4 or 5 jobs.

l. Define"resignation", "lay-off", "obsolesence", "leave of absence", and "sabbatical".

m. Make a bulletin board or collage showing possible frustrations you might meet on the job.

Job Realities Part I

Employees Expectations - 8

Putting your goals in priority-promotion - leisure time to determine that working and leisure time may be utilized to the greatest advantage.

a. Prepare charts of working and leisure time of classmates.

b. Have class discussion of strengths and weaknesses of use of time in the class charts.

c. Make corrections in individual charts to overcome undesirable aspects.

d. Prepare bulletin boards of successful people and how they allotted their working and leisure time.

e. Interview prospective employers for suggestions to help you prepare for future jobs

f. Have successful business people speak to class concerning the ways to spend working and leisure time.

How to change jobs - move into different fields - move up. To show an ability to weigh pros and cons of changing a job or moving into a different field or accepting a promotion.

a. Prepare self-evaluation charts to denote present progress, satisfaction with job and frustrations of present job.

b. List the responsibilities that may be encountered in a new job or promotion.

c. Discuss adjustment factors involved in changing jobs.

d. Discuss and list the educational requirements of a new job or promotion.

e. Interview successful people who have changed jobs.

f. Invite speakers to discuss the problems and satisfactions that accompany job changes.

g. Prepare bulletin boards of areas that may offer better opportunities for job changes.

Job Realities Part I

Employees Expectations - 10

To comprehend the difference between prestige and status and the factors involved in mobility.

a. Define and list the differences between prestige and status.

b. Itemize the factors involved in mobility - advantages and disadvantages.

c. Write compositions discussing the reasons why people like the top jobs in the organization.

d. Discuss measures and rules to be observed that help to increase prestige and status.

e. Write paragraphs on what you would do if you felt that you had no prestige or status in your job.

Marriage and jobs. To understand the relationship between marriage and jobs.

a. List limitations of job choice that may be caused by marriage.

b. Have a class discussion of financial problems in marriage that may cause a hindrance to further educational preparation for job mobility.

c. Write compositions on whether women should work after marriage.

d. Prepare bulletin boards about married women who have successfully combined marriage and careers.

e. Invite successful married men and women to lead class discussions to show relationship between marriage and jobs.

Job Realities Part I

Employees Expectations - 9

Can your job be phased out? To be adequately prepared for the possibility of a job being phased out.

a. Prepare lists of alternative skills that may be transferred to another area of employment.

b. Have members of the class write compositions to show how they would handle the possibilities of their jobs being phased out.

c. Identify people that you know whose job was phased out and how they handled this problem.

d. Make bulletin boards displaying jobs which have been phased out during the last 20 or 30 years.

e. Itemize reasons why certain jobs are phased out.

How do strikes or layoffs affect you? To understand that strikes are union or employee motivated and layoffs are measures taken by employers.

a. Define and list differences between strikes and layoffs.

b. Write about measures that can be taken to avoid strikes and layoffs.

c. Write compositions about local strikes and layoffs

d. Prepare bulletin boards of areas that are having labor problems.

e. Have field trips to an area which is being picketed.

f. Invite class lectures from labor unions and industry to present their views.

EMPLOYERS' EXPECTATIONS

Show they understand that different occupations require different educational background by listing three occupations and listing the general educational for each.

1. Interview individuals who are now employed and find out what educational background they needed to get their jobs.
2. Survey college catalogs and list the required courses that are necessary for several job areas.
3. Visit your guidance councelor and work out a suitable educational ladder for several chosen fields of work.
4. Interview teachers of different subject areas and list the various job fields open to a student which require much preparation in those subjects.
5. Conduct a panel discussion about the things employers look for when hiring individuals.

Show the different occupational training programs that are offered by selected employers.

1. Talk to several individuals who are now employed and find out what type of training programs are available where they work.
2. Call a local place of employment and ask them for their career programs.
3. Make a flow chart comparing several areas of employment and show who one may progress by making use of an Employers Training Programs.
4. From several flow charts select one career training program.
5. Prepare a community-wide survey of "what can be done after high school", which includes apprenticeship programs, armed forces training, educational programs, and on-the-job training.

EMPLOYERS EXPECTATIONS - 2

To compare those influences that will and will not cause people to work well together by listing three each.

1. Select a school organization or team listing the things the the group did causing them to work well (and not to work well) together.
2. List the ways business is helped by good competition. List the ways that business is hurt when competition is bad.
3. State how business is hurt when competition is lacking.
4. Prepare a list of things you would expect from the people you work with.
5. Assess how well you think you would get along with fellow workers on a job.

Pick out one place of employment and explain its seniority system.

1. Review your educational career so far by listing the additional responsibilities that you have obtained every year since you started school.
2. Visit a place of employment and interview several employers and have them explain their seniority systems.
3. Check arguments pro and con for Congress's seniority system (office space, committee chairmanship etc.)
4. Compare and contrast the advantages and the disadvantages of job seniority.
5. Explain the development of seniority systems in the U.S..

EMPLOYERS EXPECTATIONS - 4

Identify the major characteristics that employers look for when examining school transcripts of future employees.

1. List the parts of a school transcript in order of importance
2. Make up a school transcripts including items that you would use to send to employers.
3. Evaluate yourself using the personality section of a sample school transcript.
4. Evaluate several students' transcripts as if you were a prospective employer.

EMPLOYERS EXPECTATIONS - 3

Show various programs that places of employment used in hiring minorities.

1. Call the State Division of Human Rights to find out about laws against discrimination.
2. Interview businesses about the hiring practices of minority groups.
3. Have a panel discussion to determine what a minority group is.
4. Prepare a chart or graph which shows rates of minority employment over the last 50 years.
5. Prepare a report based on the topic "the Employment of Minorities Today in U.S."

Show an understanding of job layoffs and how they affect a family and community by some of the people who count on one individuals salary.

1. Put yourself into a roleplaying situation where you have worked in a factory or other peace of employment. List all the people you might have given money to because they provided you with goods or services.
2. List the people of a one -business town who might have to relocate because that business laid off 50% of its employees.

Show an understanding of considerations that one should make when transfering jobs.

1. Compare a list of reasons why one would want to accept a job transfer with a list of reasons why one would not accept a transfer.
2. Interview people to see if they are from your city - if not ask why they moved here.
3. Study a physical map (world or U.S.) and list the areas of the map which would not be favorable to your work desires.

Organization of Labor

Show an understanding of lines of communications by charting the line of bosses of any organization and their responsibilities.

1. Chart a list of bosses in your school. Ask your teacher who is his boss and see how far you can go.
2. See your local army recruiter and ask if you can see a chain of Command from the individual soldier to the President of the United States.

Define "labor" and"management" and point out the characteristics of each.

1. Follow the newspapers, T.V., magazines, etc. and gather information and demands used by Labor (strikes) and Management (employers).

Develop a concept of Negotiations.

1. Set up a classroom situation with some students playing roles of management and some students playing the roles of union leaders and the labor force and negotiate a contract.

Students will have their own definition of Civil Service and be able to identify one type of Civil Service job with each level of government.

1. Select from your telephone book, several departments that the Federal, State, County and City Office Buildings have listed. Contact a person from each of these departments asking them what types of requirements are necessary in obtaining a selected occupation.

Organization of Labor - 2 (Civil Service continued)	3. Use a roleplay situation where a mayor and the common council lists the requirements for two types of city jobs. 4. Explain the advantages and disadvantages of Civil Service job protection.
Understand concept of self-employment and be able to list many factors that one must take into consideration before starting a business.	1. Start your own business on paper. List all the reasons why you think you could make money in your business. List the things that might not make a profit. 2. Check your local newspaper for a business that is for sale. List the reasons why you may buy or not buy the business considering such factors as location, supply and demand, etc.

Show an understanding of Business Cycles by listing various causes and effects of Business Cycles. Be able to state what comprises a recession, depression and prosperity period.

1a. Read through history and/or economic texts and tell about 3 depressions and 3 periods of prosperity in the United States. This study should include time periods, people, causes, effects, reason for prosperity (depression) and any additional vital information.

1b. Make posters or a wall mural stretching around the room showing the Ups and Downs of the United States Economy since 1800.

1c. Do library research on U. S. Economic History, selecting the topic with the teacher

1d. Compare after interviewing people in Syracuse (even teachers) who lived through the depression to determine how individuals and families were affected by the depression in the 1930's. Make up a series of questions before you interview the people.

1e. Read books or part of books such as: Grapes of Wrath by Steinbeck, Hard Times by Terkel, Since Yesterday by Lewis on the 1930's depression.

Report on the book(s) used, telling about how the author or the people mentioned in the book viewed the depression.

1f. Report after reading microfilms of old newspapers, magazines, and/or the real material to see how people viewed the depression while it was happening. (The public library or Syracuse University will have the needed microfilm.

]g. Read through the microfilm (available at Syracuse University Library) of the Congressional Record of the 1930's and summarize our leaders' views of the depression.

2. Make a written or oral comparison of life under different parts of the Business Cycle. a) Depression b) Recovery c) Prosperity d) Recession.

3. Do written research on the history of Business cycles in other countries. (one book might be - The Stages of Economic Growth by W.W. Rostow) (available in S.U. Library and Syracuse Public Library.

ECONOMY - 2

4. Do a written and/or oral comparison of Business Cycles of various countries (see Rostow's book The Stages of Economic Growth)

5a Paste up and (or) evaluate the latest leading economic indicators for the U.S. (see the Wall Street Journal (daily on front page) The New York Times, Barrons, Time, and (or) Newsweek)

5b Draw copies of the latest indicators on poster board.

6. Write to U.S. Department of Commerce and U.S. Department of Labor for the latest economic reports.

7. Have a discussion or write a paper explaining why businesses have moved up and down in the past. (see cartoon in teacher supplement).

8. Discuss the logic of the similarity and differences between the ups and downs of the economy and human moods.

9. Explain how job opportunities would increase or decrease with changes in the Business Cycles.

10. Use Role Playing with students playing Government, Labor, and Business leaders in a discussion of the problems of controlling the economy. (further questions could be discussed).

]]. Use Role Playing with students playing a family member in the home of an unemployed family. Discuss the various problems that would be created for each member of the family.

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ECONOMY - 3

Show an understanding of Welfare by stating who is eligible for Welfare, Society's need for Welfare and Welfare's benefits.

1. Discuss or report on various types of Welfare programs.
2. List the different people who would need welfare.
3. Do a study of the history of Welfare including Charities.
4. State 5 reasons why Welfare is needed including alternatives to Welfare.
5. Study local Welfare records to cite the relationship between Welfare needs and business cycles.
6. Use role playing with some students playing unemployed workers, and a social worker deciding whether the unemployed worker is elibible for Welfare (many roles with different problems could be created.
7. Visit various Welfare Agencies making a list of various facilities and benefits available to you and your family if eligible.
8. Figure out a Welfare family's budget and try living on the food budget for a week. (don't forget the school lunch program.)
9. Write to various Government leaders for their views on Welfare based upon your questions.
10. Conduct a survey of public views on Welfare and explain the people's views.

ECONOMY - 4

Show an ability to evaluate a community by creating a checklist and evaluating the area for job opportunities.

1. Explain the difference between a community and city. (optional use of Decisions in Syracuse, Doubleday or Community Power Structure by Floyd Hunter.
2. List 5 new facts about your community using the Herald Journal and the Post Standard.
3. Make a list from the Help Wanted Ad of 8 jobs available to you in the Syracuse area.
4. List names of Employment Agencies both private and Government.
5. Make a list of Services Employment Agencies and what they offer.
6. List the various parts of an employment agency contract.
7. Make a checklist of the various aspects of the Syracuse Community which should be considered before taking a job (see teacher guide for ideas).
8. Contact various Government agencies, Federal, State and/or local for the latest survey of job opportunities in Syracuse area. (Take 8 different jobs that interest you).
9. Create a survey and talk to various businessmen to discover job opportunities.
10. Put together a booklet with community and job survey from above for others to see.
11. Write to several Chambers of Commerce in several cities asking for information about their cities. How reliable is this information? Who else could you check with?

ECONOMY - 5

Show an understanding of strikes by stating why they happen and how they affect an employee.

1. List the various strikes currently on in the Syracuse area.
2. List the major national strikes in progress or pending. (use National Publications).
3. List reasons for a student strike.
4a. Organize a student strike.
4b. Role play a student strike in your own classroom.
5. Interview a striker in your area (make up a series of questions beforehand).
6. Interview students whose parents have been on strike at one time to discover problems created in the home.
7. Talk to personnel managers to find out how strikes affect employee - employer morale - (for studies see Industrial Psychology).
8. Have a negotiation session with workers, union leaders, employers, mediators. Discuss a union contract (research must be done on issues).
9. Study and negotiate a number of issues with your principal and/or teacher.
10. Research history of strikes in the U.S.
11. List the number of man-hours lost in each of the past ten years on strikes in hours and in dollars.
12. Interview a local labor leader to determine his views on strikes.
13. Arrange for an employer an (or) union leader to come to class to discuss or debate an issue of interest.
14. Have a speaker from mediation Bureau, U.S. Dept. of Labor or N.Y.S. Dept. of Labor come to class to discuss a topic of interest.
15. Interview several teachers to find out how negotiations have affected schools in the recent years.

ECONOMY - 6

Be able to compare capitalism with other economic systems.

1. Chart a comparison of the following economic systems; Capitalism, Fascism, Communism and Socialism.
2. Write a Biography of a worker in a Capitalist country and and another economic system.
3. Debate the topic of coexistance of various economic systems.
4. Research the differences between communism in U.S.S.R. and in Communist China.
5. Research the economic views of any of the following: Karl Marx or W.W. Rostow.
6. Research any of the economic schools below:
   a. Marxism
   b. Keynesian
   c. Socialist
7. Be leader of a country with a different economic system and state how you would deal with the U.S.
8. Change the economic system of any country to something different from what it is currently. List the changes necessary within the system.
9. Have student from a country with a different economic system talk to the class.
10. Create an economic model of our society under another economic system.
11. Study the supplement for a comparison of Gross National Product of U.S. and U.S.S.R. Which country has provided their individual more goods and services.

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ECONOMY - 7

Show how a small business is affected by various changes in the economy.

Show the problem of starting an individual business.

1. Make a list of businesses that an individual could start. Show you would decide which to start.
2. List the advantages and disadvantages of going in to business by oneself.
3. List the prerequisities needed to start your own business.
4. Talk to banker(s) lawyer(s), and (or) businessmen for a list of problems and prerequistes of starting a business.
5. Have a Franchisee come and talk to the class (answer prewritten questions).
6. Visit bankruptcy court and summarize what you see.
7. Write a Franchiser for the prerequisites and the agreement to start a business.
8. List the way a banker can help out one starting a new business.
9. Contact the various Governments and state the taxes a small business would pay.
10. Arrange for a small businessman to come to class and answer questions (a parent would be good).
11. Start your own business. (check with Junior Acheivement Program Syracuse, New York - 437-2873).
12. Using a situation game, make up a business. Start it and show how it would grow through the business cycle.
13. Explain the differences between partnership and a corporation.
14. Make a list of the ways the Chamber of Commerce aids business.
15. Talk with a small businessman and find out how he got started.
16. Explain what "capital" is. What function does "capital" play in small businesses?
17. Interview a banker to find out how he decides to give people capital. How does "capital" relate to black peoples' economic condition?

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ECONOMY - 8

Show where the tax dollar comes from as well as where it is spent

1. List all the Governments and Government Agencies collecting taxes in Syracuse.
2. Draw 2 pie graphs for one level of Government showing where money comes from and another where money goes.
3. List the various types of taxes collected by one level of government.
4. Analyze the taxes, listing all those that you pay now.
5. State how different taxes affect one income group disproportionately.
6. Make a list of services available to citizens of Syracuse. Make notes to show which services are automatically performed and which must be "ordered" or requested by citizens.
7. Make a list of services available in areas outside of Syracuse eg.Dewitt, Geddes. Compare and contrast your two lists.

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ECONOMY - 9

Show how minority groups are affected in job hiring and firing. Show how the programs for minorities in our area help minorities.

1. Survey people about their views on compensation training programs.
2. Talk to the National Alliance of Businessmen about their minority hiring and training program.
3. Research old periodicals and microfilms for court ruling on minority hiring.
4. Find copies of old Congressional records and list parts of Civil Rights Bill (Syracuse University Library).
5. Make a list of the various Civil Rights groups that will help the worker in Syracuse.
6. Use role - playing to illustrate the problems a minority worker would have in an interview. (needed a minority worker and a personnel manager).
7. Question a minority worker in a training program.
8. Investigate Manpower Development Programs through the office of Continuing Education at the Board, or through Madison School. Report on your findings.

CAREERS UNLIMITED...
Services - People Oriented

ENGLISH SOCIAL STUDIES MATHEMATICS SCIENCE

Services: People-Oriented - English

Introduction

All of the jobs in this field deal directly and mostly with people. While some service jobs involve working with things--machines, appliances, cars--these jobs perform their work almost entirely in contact with people. First and foremost, therefore, the worker in any of these jobs must know how to get along with his customers. A restaurant which treats its customers poorly will go out of business; a public health official who has not learned to be understanding with people will soon lose his job; a teacher who does not "get along" with his students will probably teach them nothing.

English has much to offer people preparing for these jobs. First, it can help the student acquire the skills necessary to perform the technical aspects of his job: the reading, the writing, the speaking, the listening necessary to communicate with others on the job. But, more important, literature and the basic "know-how" of communications--also an important part of English--can teach students the important things they need to know about people.

Services-People Orientated

Workers In or Around Private Homes

To outline methods of finding employment in or around private homes.

a. Ask a librarian or teacher to tell you where to look for jobs in or around private homes.

b. Canvas your neighborhood and list the kinds of jobs people are willing to pay to have done.

c. List the number of advertisements found in the classified section of the newspaper that offer jobs in private homes.

d. Pick an advertisement that appeals to you, and explain why you would be a good choice for the job.

e. List chores that you like to do around the house, and pick one that you might be able to do for pay.

f. Ask someone you have worked for at "home" (ie., babysitting, lawn-mowing, etc.) to write you a letter of recommendation stating your qualificaiions for this kind of work.

g. Prepare a collage, or portfolio showing jobs done in or around private homes.

h. Ask a member of your family to tell you what job you do best; then investigate if someone will hire you to do this job for him.

i. Interview someone who works in or around a private home and list how he got his job, whether or not he likes it, and if he would recommend it as a job for young people.

j. Call the N.Y. State Employment Service and find out how great the need is for the "home" job you're interested in.

k. Investigate the salaries that "home" workers earn.

l. List some of the advantages and disadvantages in being a worker "in or around homes."

m. List some of the advantages and disadvantages in doing the "home"job of your choice.

Services-People Oriented

Workers In or Around Private Homes

To outline skills needed to do jobs in or around private homes.

a. Watch T.V. for an evening, and list the characters on T.V. that work in or around private homes.

b. List the skills that T.V. characters that work in or around private homes have.

c. List the character traits that T.V. "home" workers exhibit.

d. Pick a job that one of these T.V. "home" workers does,and explain why/why not you would like to do this job.

e. List skills necessary to do the "in or around home" jobs of your choice.

f. Make a poster showing the skills necessary to do the "home" job of your choice.

g. Investigate the demand for your type of "home" work.

h. List character traits (requirements) necessary to do the "home" job of your choice.

i. Outline methods whereby you can get the training to do the job of your choice.

Services-People Oriented

Workers In Government Service

To outline methods for finding employment in government service.

a. Ask your librarian to show you where to find out about the kinds of jobs available in government service.

b. Write to the federal government and ask for information about civil service jobs.

c. Plan a field trip to the County Office Building and list the kinds of jobs being done.

d. Get a copy of the Civil Service Exam book and attempt some of the questions.

e. Pick a civil service job that you would like to do, and investigate how to go about getting it.

f. Interview someone who is doing the civil service job you want and find out how he got the job, his feelings about it, and if he recommends it.

g. Investigate what job the job of your choice might lead to.

h. List the advantages involved in working for government.

i. Investigate the salaries earned by civil servants doing the job of your choice.

j. Ask a government worker to speak to your class about his work and the ways to go about getting a job in government.

k. Make a collage of pamphlets describing different kinds of government work.

Services-People Oriented

Workers In Government Service

To outline skills needed to do government work.

a. Survey some government employees and list the skills they need to do their particular jobs.

b. Collect some pamphlets that outline government jobs and list skills necessary in performing each.

c. Interview someone who does the civil service job you are interested in, and outline the skills you would need to do this job.

d. Outline the training necessary to do the civil service job of your choice.

e. Outline methods whereby you can get the training to do this civil service job.

f. Make a collage showing skills needed to do civil service job of your choice and training needed to do each skill.

g. Investigate the advantages and disadvantages in performing this service for the federal government.

h. Outline the starting salary, increments, and fringe benefits over 10 years that doing this service for the government will provide you with.

i. Make a bulletin board showing the different types of government jobs and the skills necessary to do them.

j. Ask someone in government to come to the school and speak to the students about skills involved in working some civil service jobs.

Services-People Oriented

Workers In Law Enforcement

To outline methods of finding employment in law enforcement.

a. Call the Public Safety Building and ask for information about how to join the police force.

b. Write to the N.Y. State Troopers Headquarters in Oneida, N.Y., and request information on how to become a state trooper.

c. Ask your librarian about information on careers in law enforcement.

d. Outline the different types of jobs in law enforcement for men or women or both.

e. Ask a member of the police department to speak to the class about jobs in law enforcement and how to go about getting them.

f. Make a collage showing types of employment found in law enforcement.

g. Go to the Public Safety Building and list the different types of jobs being done.

h. Write a paragraph about the kind of job in law enforcement you would like to do, and describe the job, salary, and how to go about getting the job.

i. Outline a method showing how to get a job in law enforcement.

j. Describe the job in law enforcement that you're interested in and show the promotions available.

k. Interview someone in law enforcement who is doing the job you're interested in and find out how he got the job, how he likes it, and if he'd recommend it.

Service-People Oriented

Workers In Law Enforcement

To outline skills needed to do law enforcement work.

a. Watch T.V. for several nights tuning in to programs that deal with law enforcement, and list different jobs law enforcers do.

b. Watch a T.V. "police" show and list skills displayed by the characters.

c. Survey people to find out WHAT DUTIES DO POLICE DO?

d. Ask a policeman or other member of law enforcement agency to speak to your class about training and skills needed by law enforcers.

e. Discuss what a policeman should be like with two or three other students.

f. Play a few games of CLUE with 3 other classmates to see who is the best detective.

g. Make a poster showing skills law enforcement officials need.

h. Read Soul Brothers and Sister Lou and discuss the role of the police in this book.

i. Ask your teacher to give you some stories that deal with law enforcement, and describe the role of police and skills they need.

j. Go to the Public Safety Building, and investigate five different law enforcement jobs. List the training and skills needed to do each one.

k. Pick a career in law enforcement that interests you and list how to get the job training and skills necessary to do this job.

l. Pick a career in law enforcement that interests you, and show on a poster, maximum and minumum salaries, fringe benefits, advantages and disadvantages, skills, training and method of getting this job.

m. Draw a picture showing the man (woman) and equipment they use in law enforcement. (If they wear a uniform, draw the uniform.)

n. List some of the dangers involved in law enforcement.

o. List some of the dangers involved in the area of law enforcement you're interested in.

Service-People Oriented

Workers In Law Enforcement
(continued)

p. List the training and skills you will need to overcome come some of the dangers involved in an area of law enforcement you are interested in

q. Write a T.V. script showing a confrontation between the law and the public.

r. Make a film showing a confrontation.

s. Project an area of law enforcement into the future and describe the skills and training that will be needed to do this job.

t. Research and discuss "A day in the life of a Cop".

To outline methods of finding employment in fire prevention.

a. Visit a fire house near your neighborhood and ask how to get information on jobs with the fire department.

b. Ask librarian to show you how you can find information on jobs dealing with fire prevention.

c. Pick a job in fire prevention, and describe the training you would need to do the job and how you can go about getting this training.

d. Make a collage showing the various jobs in fire prevention.

e. Outline five jobs in fire prevention, what they involve, and how to go about getting them.

f. Ask a fire inspector to speak to your class about the need for workers in fire pervention.

g. Outline a method of obtaining a job of your choice in fire prevention.

h. Report on the need for workers in fire prevention.

i. Report on salaries, fringe benefits, insurance programs, for workers in fire prevention.

j. Interview a fireman about his job, how he got it, the training necessary, if he likes it, and if he recommends it.

Services-People Oriented

Workers In Fire Prevention.

To outline skills needed to do fire prevention work.

Visit a fire house, and list the equipment used.

Research and discuss with a member of the fire department, what training and skills you would need to become a firemen.

List skills needed in the area of fire prevention that interests you.

Make a collage of equipment and skills needed in the area of fire prevention that interests you.

Prepare a report on the dangers involved in working in fire prevention.

List the skills needed to overcome the dangers in the area of fire prevention that interests you.

Talk to a firemen,and write a paragraph on "A Day In The Life Of A Fireman"

Outline the training and education you need to go into fire prevention.

Services-People Oriented

Workers in Food Service

To outline methods of finding employment in restaurants.

Go into a large restaurant and list the number of different jobs being done.

Interview a worker at the restaurant and find out how he/she got the job.

Look in the help wanted column of the classified section of the newspaper and list kind of jobs offered in restaurant work.

Select a job in restaurant work that interests you, research training needed, and how to go about getting this job.

Get a part-time job in a restaurant, describe the job, and write a paragraph explaining how you got this job.

Go to a drive-in restaurant and list the job opportunities that you see there.

Services-People Oriented

Workers In Food Service

To outline skills needed in restaurant work.

a. Outline the duties of five types of restaurant workers.

b. Draw a place setting for one person.

c. Make a model restaurant and practice greeting, seating, and waiting on a customer.

d. List the skills needed to be the restaurant worker of your choice.

e. Prepare a sample menu.

f. Collect menus from different restaurants and make a collage, or bulletin board using them.

g. List the ingredients needed for five items on a sample menu.

h. Organize an efficient kitchen.

i. Make a poster showing restaurant personnel and the skills each one needs.

j. List 3 or 4 great chefs and investigate one of them and how and where he got his training.

k. Watch Julia Child or Graham Kerr (Galloping Gourmet') on T.V. and list some of the skills they have.

l. Define "entree, appetizer, Soup de Jour, á la carte."

m. List five appetizers and the ingredients for one of these.

n. Make a glossary of cooking terms that are essential for a cook to know.

o. Write out your favorite recipe including directions on how to make it.

p. Illustrate a menu.

q. Survey people, and find out what they look for in a restaurant and what annoys them the most in a restaurant.

r. Plan the interior of a restaurant (ie. greek, french, soul-food, etc.)

s. List skills needed to work in a drive-in restaurant.

t. Explain in a paragraph what you would need to do to run a successful drive-in restaurant.

Services-People Oriented

Workers in Food Service

To outline methods of finding employment in food services for public institutions.

a. List five public institutions that have food services.

b. Ask librarian to help you find information on careers in public institution food service.

c. List personnel in food service and the training they need to apply for a job in public institution food service.

d. Pick a field in this area of food service and investigate salary, fringe benefits, advancement opportunities, and how to find a job.

e. Pick three jobs in this area that interest you, write a job description of each and how to go about getting one of these jobs.

f. Interview the cafeteria manager of your school and find out how she hires workers.

g. Call a public institution and inquire how to go about applying for a job in their food service.

h. List the kinds of jobs available in the school cafeteria.

i. Make a collage showing personnel in food service in a public institution.

j. List kinds of jobs available to students in the school cafeteria.

Services-People Oriented

Workers in Food Service

To outline skills needed
in food service for public
institutions.

Service-People Oriented

Workers In Food Service

To outline methods of finding employment in the baking industry.

a. Visit a bakery, and question one of the workers on the types of jobs available in the bakery. List these.

b. Find information in the school library and the kinds of jobs available in the baking industry.

c. List jobs available in the baking industry, and write a short job description of each.

d. Plan a field trip to a commercial bakery, and list the types of jobs available.

e. Call a bakery, and ask how you can go about applying for a job.

f. List the qualifications necessary to do the job in the baking industry that interests you.

g. Write a paragraph explaining how you train to become a baker.

h. List the items you would sell if you had a bakery of your own.

i. Make a pastry and bread collage.

j. Research the salaries, working hours, working conditions of the job in baking that interests you.

k. Interview someone in the baking industry and record how he got his job, if he likes it, its good and bad points, and if he recommends it.

Services-People Oriented

Workers In Food Service

To outline skills needed in the baking industry.

a. Make a glossary of essential baking terms.

b. List the qualities that a good baked item should have.

c. Write out your two favorite recipes for baked goods.

d. List the skills needed for the job in baking that interests you.

e. Set up a class bakery shop for one day.

f. Draw some fancy icing designs for cakes.

g. Using styrofoam and, icing, and paints and make a wedding cake.

h. Make a collage showing jobs and skills in the baking industry.

i. Make a concrete pastry poem.

j. List five skills that a baker should know.

k. Draw the kitchen of a bakery.

l. Make a poster showing pastries and the country they come from.

Services-People Oriented

Workers In Beauty Culture

To outline methods of finding employment in beauty culture.

a. Visit a beauty salon and interview one of the operators about how to become a hair dresser. List your findings.

b. Visit a school of beauty culture, and find out about job opportunities in this field, Write a report on your findings.

c. Write to National Hairdressers' and Cosmetologists Associations, 175 Fifth Avenue, New York, N.Y. 10010 for information about careers in this area.

d. List types of jobs available in beauty culture.

e. Spend a day at a beauty parlor, and list the kinds of jobs you observe.

f. Make a poster showing the different job opportunities in beauty culture.

g. Find, and report salaries, working hours, and fringe benefits available in this field.

h. Outline the advantages and disadvantages found in the career in beauty culture that interests you.

i. Prepare a list of beauty schools that are found in Syracuse, and list their tuition fees and placement services.

j. Outline the kind and quality of training a beautician needs.

k. Interview someone who operates his/her own beauty salon, and report on how they started their own business.

Service-People Oriented

Workers in Beauty Culture

To outline skills needed in beauty culture.

a. List the basic things any hairdresser must know how to do.

b. List the basic things any cosmetologist must know how to do.

c. Outline the skills needed in the field of beauty culture that interests you, and rate them according to how difficult or easy they are to do.

d. Do someone's hair and makeup, and write a report explaining how you went about doing this.

e. Make a Hair-do magazine where you feature some original hair designs and fashions.

f. Make a collage showing hair-do's and make-up past, present, and future.

g. Draw a picture of a woman in the hair do and make-up of the year 2000 A.D.

h. Prepare a "Beauty Tip Handbook" where you give woman advice on how to be beautiful.

i. Teach a group of girls how to apply make-up. (ask for a volunteer)

j. Give a lesson on HOW TO CARE FOR YOUR HAIR.

k. Write a report on the types of hair do's and hair cuts popular today.

l. Teach a group of your classmates about nail grooming.

m. Interview someone who works in a beauty salon, and write about A DAY IN THE LIFE OF A BEAUTICIAN.

n. Pass out a questionnaire that asks about basic beauty problems eg. frizzy hair, oily skin, blemishes, etc. and report on your findings.

o. Ask your classmates, or other people you know to give you a "beauty tip" that you can share with others. Put these together on news bulletin form and pass them out to your friends.

p. Research magazines for professional beauty tips, and put these together in a notebook. Share it with your friends.

q. Discuss, in a group, the best feature of each of your classmates, and how it can best be accentuated.

Service- People Oriented	q.	Prepare a glossary of beauty culture vocabulary.
Workers In Beauty Culture	r.	Collect samples of beauty and hair dressing products. (Stores often give samples out to interested people.)
	s.	Invite a hair dresser, or beautician to speak to your calss about careers in this area.
Workers In Men's Hairdressing	a.	Visit a local barbershop, and interview a barber about how you can learn his trade.
To outline methods of finding employment as a barber.	b.	Ask your librarian to help you find information about apprenticeship programs.
	c.	Write to the National Association of Barber Schools Inc., 750 Third Avenue, Huntington, W. Va. 25701 about information on how to become a barber.
	d.	Watch a barber at work, and compute how many customers he handles per hour.
	e.	Research and record a barber's salary, hours, working conditions, fringe benefits, and training.
	f.	Compute the number of barber-shops in your neighborhood.
	g.	Outline a barber's apprenticeship program.
	h.	Interview a barber about his work, and ask him to tell you why he would recommend it to a young person.

Services-People Oriented

Workers in Men's Hairdressing

To outline skills needed in hairdressing.

a. Watch a barber and list the routine he follows in dressing a customer's hair.

b. Interview a barber about the skills he needs to know and list these.

c. Illustrate barber's tools and skills that go with them.

d. Illustrate men's hair fashions of today and yesterday.

e. Outline skills a barber needs to know and rate them as hard, medium and easy to learn.

f. Make a men's hair fashions magazine using pictures and your own illustrations.

g. Investigate the field of making men's hair pieces, re-grafting of hair, and hair-weaving. Report and discuss these methods.

h. List men's hair styles and grooming aids in an alphabetized illustrated directory.

i. Inquire at the N.Y. State Employment service about training programs for barbers. List them.

Services-People Oriented

Careers in Custodial Work

To outline methods of finding employment as a custodian.

a. Interview a school custodian on how to get a job in custodial work.

b. List the kinds of custodial work being done in the school.

c. Call the New York State Employment Service about jobs in custodial work.

d. Research and list salaries, working hours, working conditions, fringe benefits, and requirements for custodial work.

e. Ask a custodian to speak to your class about the advantages and disadvantages of custodial work.

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a. List the kinds of duties custodians perform.

b. Outline the skills a custodian needs and the things he needs to know how to do.

c. Work along with a custodian for an hour and write a report on his/her routine.

d. Investigate job opportunities for part-time custodial work.

Services-People Oriented

Members of Armed Forces

To outline methods of obtaining information about service in the armed forces.

a. List the branches of the armed forces.

b. Go to a recruitment center for any one of these branches and obtain information on how to join the service.

c. Make a poster showing the different branches of the armed forces.

d. List the advantages, disadvantages, benefits, and salaries of the armed forces.

e. Ask a member of the armed forces to speak to your class about life in the armed forces.

To outline qualifications necessary for service in the armed forces.

a. List the requirements for service in the branch of the armed forces that interests you.

b. Make a poster showing the training program for the branch of the armed forces that interests you.

c. Write a paragaaph on "A day in the life of a private."

d. Read No Time For Sergeants or another book about military life, and describe barracks routine as it appears in this book.

e. List work that you can do in the armed forces,even if you're not fit for active duty.

Service-People Oriented

Workers in Public Health Service

To outline methods of finding employment in public health service.

a. Arrange a field trip to Upstate Medical Center to find out about health careers.

b. See nurses about information on health careers.

c. Start a health careers project, and invite speakers to speak to your group about these careers.

d. Make a bulletin board showing careers in public health service.

e. Call CAREERCO and ask them to send you information on training programs in health careers.

f. Pick a job in health careers that interests you. Investigate training, requirements, salaries, fringe benefits, working hours, and working conditions. List these.

g. List advantages and disadvantages in public health service.

h. Check with O.C.C. about health service training programs there.

i. List jobs in public health service which require college education and those which don't.

To outline skills needed in public health services.

a. List personal qualities any worker in public health service needs.

b. Outline skills you would need to know in the fiels of public health service that interests you.

c. Interview someone in the field of public health service that interests you, and let them tell you the skills you will need to know.

d. Volunteer to help the school nurse, or school dental technician and record your duties and her routine.

e. Pick a career in public health service, and illustrate training and career duties.

f. Design a uniform for yourself that would be functional in your job in health careers.

g. Write to Washington, D.C. about information on "para-medics" and other "para-professional health careers.

Services-People Oriented

Careers in Dental Work

To outline methods on how to become a dental worker.

a. Call American Dental Association,and ask for information on how you can become a dentist.

b. Write to the University for information on how to become a dentist.

c. Ask your dentist about career opportunities in dental work and the kind of training a dentist needs.

d. Inquire about salaries, working hours, working conditions and benefits in dentistry.

e. Prepare a dental work display.

f. Write a paragraph on the advantages, and disadvantages of the dental profession.

g. List the types of dentistry being practiced today, and write a brief description of each.

h. Outline the training needed in the branch of dentistry of your choice.

i. Investigate and report on jobs connected with dentistry but not requiring as much work (e.g. dental hygienist, dental technician, X-ray technician).

j. Through research and visits to dentists, discover what a dentist has to know and do besides dentistry to operate his own business.

Services-People Oriented

Careers In Dental Work

To outline skills needed in dentistry.

a. Outline a dental care program that you would tell your patient to follow. (Ask your dentist for tips).

b. List things any dentist must be able to do.

c. Make a poster showing teeth and their roots.

d. Investigate and report on several diseases that affect teeth and gums.

e. Illustrate a dental hygiene poster.

f. Visit a dental school and write a report on what you observe.

g. Ask your dentist to let you spend a few hours in his office watching him work. Outline what he does, how he talks to his patients, etc.

h. List types and kinds of equipment dentists use. (Ask your Dentist).

i. Visit a dental clinic and list types of jobs being done there.

j. Report on the duties and skills of a dental hygienist / X-ray technician / dental technician.

k. Interview the school dental hygienist about what she has to do and which skills are the most important. Report on these.

Service-People Oriented

Careers in Medical Work

To outline methods on how to become a Medical Worker.

a. Write to Upstate Medical School, and ask for information on requirements for medical school.

b. Outline the training someone needs to become a doctor.

c. Research the areas of medicine being practiced today. Record the area(s) that interests you, and write a short paragraph describing this area.

d. Visit Upstate Medical Center and ask to speak to a doctor about requirements for a career in medicine.

e. Watch some of the "doctor" shows on T.V. and write down the kinds of medicine these doctors practice.

f. Write a paragraph, or a report on what kind of doctor you want to be, and why you want to be a doctor.

g. Research and record a doctor's training after medical school, salary, working hours, working conditions, and fringe benefits.

h. Write the advantages and disadvantages of being a doctor.

i. Research and record the kinds of jobs available in a doctor's office.

j. Pick a job done in a doctor's office, other than the doctor, and write a short description of it.

k. Research the requirements for a job in a doctor's office. List these.

l. List some of the workers who work with doctors in hospitals.

m. List the requirements needed for one of these jobs in medical work that interests you.

n. Make a collage showing the different types of workers in medical work.

o. Investigate the requirements necessary to be a para-medic.

p. Visit Upstate Medical Center, go up to one of the wards and observe the different types of jobs being done. List these.

q. List the types of workers found in the laboratory of a hospital.

r. Investigate salary, requirements, training, working hours, and fringe benefits of a medical worker of your choice (other than a doctor).

Services-People Oriented

Careers In Medical Work

To outline some skills needed by medical workers.

a. Make a poster showing basic equipment a doctor uses.

b. Ask a doctor if he can tell you what his dailiy routine is. Record this.

c. Watch a T.V. "doctor" show and write a paragraph on the doctor's routine.

d. Write a paragraph on the personal qualities a good doctor needs.

e. Write a short script for a T.V. show that shows a doctor facing a crisis.

f. Write an essay about a doctor's day in the year 2000.

g. Outline the skills the medical worker of your choice needs to have.

h. List the types of skills needed to work in a laboratory of a hospital.

i. Make a poster showing equipment, uniform, duties, and skills of a medical worker, other than a doctor.

Service-People Oriented

Careers In Nursing

To outline methods of how to enter a career in nursing.

a. Write to a school of nursing (ask librarian to help you) and ask for information on how to become a nurse.

b. Interview a nurse and record her working hours and type of nursing she does

c. List the different kinds of nursing careers available.

d. Volunteer to work as a CANDY STRIPER and report on your duties, and hospital routine.

e. Investigate and list nurse's salaries, working hours, working conditions, fringe benefits.

f. List advantages and disadvantages of being a nurse.

g. List and briefly discuss the various specialties within the nursing field. How does one prepare differently for each?

To outline skills needed to be a worker in the nursing field.

a. Volunteer to work as a Candy Striper, and report on the skills you need to know, and those you observe in nurses.

b. List the personal qualities a nurse needs to have.

c. Design a comfortable functional nurse's uniform.

d. Outline the skills you will need to do the type of nursing that most interests you.

e. List some of the skills any nurse needs to have.

f. Write a paragraph on "WHAT I WOULD DO IF I WERE A NURSE".

g. From your outline in "d" above, list where you would gain each of the skills you need.

Services-People Oriented

Careers in Education

To outline methods on how to get a job working in education.

a. Interview a teacher, and ask him/her what the requirements for teacher's are.

b. Research and record salaries, working conditions, working hours, and fringe benefits.

c. Ask your teacher to describe a day's routine.

d. Write to Syracuse University's School of Education and inquire about teacher training, and careers in teaching.

e. Write a paragraph on WHY I WANT TO BE A TEACHER.

f. Explore and record teacher's salaries, working hours, working conditions, and fringe benefits.

g. List some of the advantages and disadvantages of being a teacher.

h. List careers other than public school teaching but still connected with education, and discuss briefly the role of each.

i. List some of the requirements needed by the worker in education, (other than the public school teachers) in the job that most interests you.

j. Investigate salary, working conditions, working hours, and fringe benefits of this worker.

Service-People Oriented

Careers In Education

To outline skills needed to work in education.

a. List the personal qualities you feel a good teacher should have.

b. Ask your teacher to tell you what kinds of things a teacher must know how to do.

c. Prepare and teach a lesson about something you're interested in to a group of students. Have your teacher rate you.

d. Write a paragraph on "MY FAVORITE TEACHER".

e. List ten things you would change about school if you were a teacher.

f. Volunteer to help a poor student in a subject you do well in. Record his progress.

g. Help a brother or sister with their homework. Record his/her progress.

h. Ask your teacher to show you what a lesson plan is, and then write one yourself.

i. Read The Miracle Worker and explain how Annie Sullivan taught Helen Keller to speak.

j. Ask your librarian to help you find information on schools of the past. Write a report on what schools used to be like.

k. Write an essay about schools of the future.

l. Observe your teachers in their classroom, and write an essay comparing and contrasting their routines.

m. Write a skit showing a sad, or funny incident between a teacher and his/her class.

n. Watch Room 222 on T.V. for a few weeks and describe some of the problems a teacher can face.

o. Using paper, or a box, draw or build a model classroom.

p. List some of the skills needed by teacher-aids.

q. Write short job descriptions of some jobs connected with education, other than public school teaching.

r. List the skills needed for a job connected with education (other than public school teaching) that interests you.

Services-People Oriented

Careers In Law

To outline methods on how to become a worker in law.

a. Write to a Law School and ask for information on how to become a lawyer.

b. Go to Legal Aid Office and ask to interview a lawyer. Record what he tells you about how he became a lawyer.

c. Ask librarian to help you find information on the different types of law being practiced. Write a short job description of the area(s) that interests you.

d. Write a paragraph on the kind of law you want to practice and why.

e. Investigate and outline a lawyer's salary, working hours, working conditions, and fringe benefits.

f. List some of the advantages and disadvantages of being a lawyer.

g. List some of the jobs found in law offices other than a lawyer's.

h. Investigate the requirements for one of these jobs.

i. Investigate salaries, working hours, working conditions, and fringe benefits for one of these jobs.

Services-People Oriented

Careers In Law

To outline skills needed to be a worker in the legal field.

a. List the kinds of personal qualities a lawyer needs.

b. Read The Devil and Daniel Webster and explain how Daniel outwitted the devil.

c. Watch two or three of the lawyer "T.V." shows and list some of the skills that the T.V. lawyers have.

d. Read a Perry Mason mystery story by Earl Stanley Gardner and write a paragraph on Perry's qualities and his skills as a lawyer.

e. Write a script where a trial takes place and you play the "lawyer" part

f. Read the play,WITNESS for THE PROSECUTION, and outline the qualities the defendant's lawyer has.

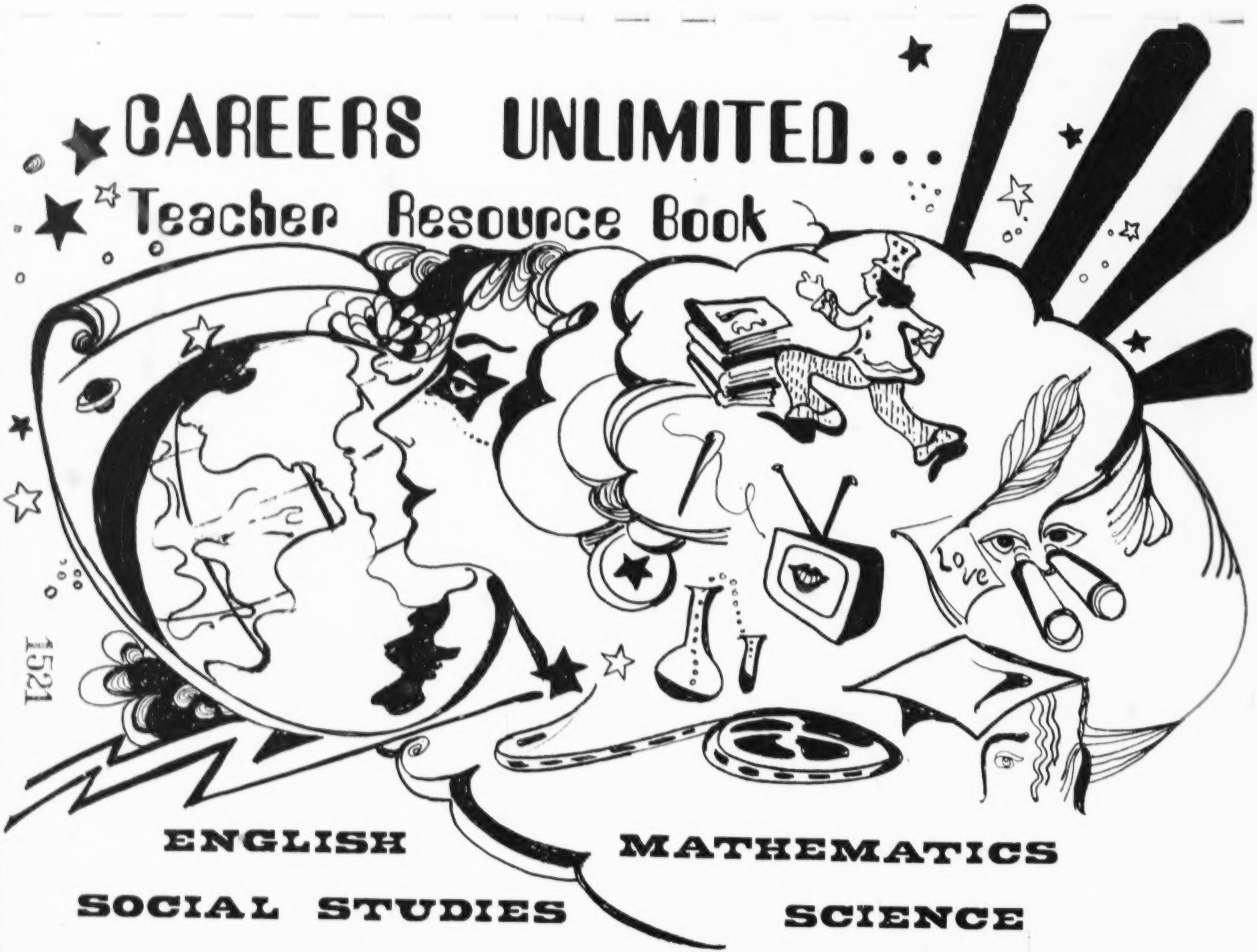
g. Visit city court and record what happens between lawyer, client, and judge.

h. List skills needed by a legal secretary.

i. List skills needed by a worker in law, other than a lawyer.

CAREERS UNLIMITED...

Teacher Resource Book



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ENGLISH MATHEMATICS

SOCIAL STUDIES SCIENCE

INTRODUCTION

Funded by a special grant from the U.S. Office of Education, the Guided Occupational Orientation Program will be a part of the curriculum throughout grades 6-12. Careers Unlimited is the junior high school segment of this program.

The basic idea behind the junior high program is extremely simple: junior high students, we feel, should begin to examine alternative careers and to examine themselves and their goals in light of these careers. The Guided Occupational Orientation Program seeks to meet these goals.

All four of the required junior high school subject areas (English, mathematics, science, and social studies) participate in the program, and a separate booklet has been developed for each career field in each area. Thus there are four "Entertainment and Communications" booklets--one in each of the four subject areas. In addition, there is an introductory booklet--designed for use in English and social studies classes--simply titled, "Careers Unlimited."

Seven career fields are included in the program:

1. Clerical and Sales Careers
2. Services - Working with People
3. Services - Working with Things
4. Working on the Land
5. Manufacturing Careers
6. Structural Work
7. Entertainment and Communications

The hope of the Writing Committee is that a student will be able to pick a field of interest, e.g. structural work, and study that career field simultaneously in each of his four subject areas. Thus, he would be studying structural work in his English, social studies, mathematics, and science classes at the same time. Another possibility, discussed in the following pages, is that one teacher of the four could

be responsible for working with each individual student in all four of the areas. This possibility is especially promising for those schools organized on a "house plan" basis.

Unlike many other curriculum materials in past years, the booklets included in the Guided Occupational Orientation Program are not "curriculum guides" or "syllabi." They are, rather idea-books, books from which both students and teachers can get ideas about how a student can learn more about the careers in his field of interest. Almost entirely, the booklets consist of "objectives" and "activities"--so that the teacher and the student may cooperatively determine the objectives to be pursued, and the teacher can help the student to choose appropriate activities which will lead to the chosen objectives.

Under the terms of Secondary Bulletin No.101--the course approval bulletin for the Guided Occupational Orientation Program--each school in the system is to devise its own means of implementing the program. The booklets and materials recommended in this guide are simply tools to be used by the school as it sees fit. The "mandates" or "requirements" stated in the bulletin are few: 1) every student in grades 7-9 is to study career orientation; 2) every student should spend approximately as much time on career study as he does in any <u>one</u> of his other courses; 3) the student is to study career orientation in <u>all</u> of the four areas to which he is assigned. (Obviously, a 7th-grader not normally taking science will not do the science part of the Guided Occupational Orientation Program <u>unless</u> one of his other teachers can guide his study in science.); 4) each school is to file an implementation plan with the Office of Secondary Education. One unit of credit will be granted 9th grades; normal school credits will be granted 7th or 8th grades.

The school has several resources to help plan its implementation of the program. First, Assistants and Associates in Secondary Education can help through their knowledge of curriculum

planning and programming. Second, the District's four Occupational Resource Specialists--operating from the Office of Pupil Services--have been specially trained to help. Third, one of the teachers in each school will be meeting throughout the school year as part of the secondary writing team--those people who first wrote the booklets you will be using.

In the following section of this booklet--"Implementing Guided Occupational Orientation"--two topics are dealt with. First, some suggested school-wide approaches to the program are presented. Those described here are only a few of the possibilities; it is entirely possible that each school can design its own tailor-made program, only vaguely representing one of the designs described. Second, some suggestions for working with individual students in individual classes are discussed, as a means to each teacher's personal planning for the program.

The Secondary Writing Team
Guided Occupational Orientation Program

Ron Cocciole - Social Studies Teacher
Andrew Cooper - Social Studies Teacher
Pete Gallagher - Science Teacher
Gerald Mingolelli - English Teacher
Jo Ann Morabito - Mathematics Teacher
Steve Phillips - Assistant in Secondary Education
Faye Zuckerman - English Teacher

Helen Kahn - Graphic Artist

Curriculum Aides for Guided Occupational Orientation

Introductory Planning Guide	English & Social Studies - 1 booklet
28 Planning Guides	English - 7 booklets; 1 each in: Clerical and Sales Services: People-Oriented Services: Things-Oriented Manufacturing Structural Work Working on the Land Entertainment & Communications Social Studies - 7 booklets Science - 7 booklets Mathematics - 7 booklets
Supplementary Packet	Forms, charts, sample materials for use by students and teachers
Teacher's Resource Book	Bibliography, program summary, suggestions for implementing program school-wide and in individual classrooms.

Information and details available from:

Stephen Phillips
Syracuse City School District
409 West Genesee Street
Syracuse, New York 13202

Each teacher should have one copy of the teacher resource book.

Each teacher will have one class-set of student-teacher booklets in his discipline:

5 copies	Clerical and Sales	Pink cover - Mathematics
5 "	Services: People-Oriented	Blue cover - Science
5 "	Services: Things-Oriented	Yellow cover - Social Studies
5 "	Working on the Land	Green cover - English
5 "	Manufacturing	
5 "	Structural Work	
5 "	Entertainment	

35 booklets

Each English and each social studies teacher should have 1 class-set (35) introductory booklets (white cover)

Each teacher should have one copy of the supplementary activities packet.

Guided Occupational Orientation: The School-wide Plan

Secondary Bulletin 101 outlines important facets of the program:

1) All students in grades 7, 8, and 9 are to participate in the program;
2) A student is to study career orientation in his mathematics, English, social studies, and science class--or in each of these subjects for which he is enrolled;
3) Grade 9 students will receive one unit of credit for successful career study; normal "school credit" will be granted Grade 7 and Grade 8 students;
4) The principal of each school is to submit an implementation plan for the Guided Occupational Orientation Program in his school. This plan should include the process by which teachers from the four subject areas will coordinate their planning and teaching for the program, in addition to the school's method of arriving at a single grade in career study for each student. (Schools have the option of selecting either a pass-fail system or another system consistent with the grading system currently used in the school.

Following are several possible organizations of school staffs for implementation of this program:

"House Plan" schools

"Core Program" plan - With this type of organization, each student would be responsible to one of his four teachers for career study, though this teacher would plan with the student for work in all four areas (English, social studies, science, and mathematics.) Under this system, each teacher would work with one group of students for a four-period block of time, either one day/week throughout the year or for one unit of study comprising approximately 120 periods of class time. Within the house, students could be "exchanged" by the teachers for shorter periods of time. Thus, if one of the students permanently assigned to career study under his English teacher needed to use science equipment, his English teacher would work out an exchange agreement with the science teacher.

With this plan of implementation, the planning booklets could be used in an infinite variety of ways. A student who needed extra help in social studies could be urged to concentrate on this phase of the program; a student especially interested in mathematics could specialize in the mathematics phase of the program. More important, the planning guide could be put to very effective use, with a student and teacher cooperatively selecting objectives and the activities which will lead to their

fulfillment. A system of diagnostic teaching thus becomes possible: the teacher and student collectively assess a student's strengths, weaknesses, and interests; together, they select objectives in line with these factors; and the teacher recommends activities which aim at fulfilling these needs.

"Coordinated Teaching" plan - With this type of organization, the students would move from class to class as they often do. The student would, however, negotiate one contract or course-of-study with the team of teachers for his house. Each teacher would then accept responsibility for guiding the student's study in a designated area of study. Because of the scheduling possibilities made possible by the house plan, some "exchanges" could still be made, so that a student could spend extra time for extra help with a particular one of his teachers.

Non-House Plan Schools

The task of coordinating the teaching effort in schools which do not have a "house plan" may be difficult, but it is no less important. The teaching staff in each school--whether a school with a house plan or one without--will have to come to some agreement about coordinating the Guided Occupational Orientation Program.

One possible scheme of coordination would use one of a student's teachers--perhaps the English teacher--as a "base teacher" for his career study. It would be the job of this teacher to orient the student to the world of work, also to help him choose areas and means of studying careers throughout his school day. If each of a student's four teachers are simply left to "go their own ways", the program will be confusing, and its educational benefit will be minimal.

A student might be asked, for example, to draw up the specifications for his contract-study--in English, social studies, science, and math--under the supervision of his English teacher. The contract would then be taken to each of the teachers for their recommendations and approval. Any changes, however, would be worked through the English teacher, so that he would remain the adult responsible for the student's total program. During the school year, other teachers would meet regularly with the student and the English teacher to help the student evaluate his work; the English teacher would, at the end of the marking period, sit with the student to make his final evaluation.

For the Individual Classroom Teacher

The Over-all Teaching Plan

Any good unit plan, lesson plan, class or individual project contains three important phases: introductory activities; developmental activities; culminating activities.

Introductory activities are those which help the student and teacher collaborate on the scope and sequence of the work to be done. These activities are also the things to build students' motivation for future work.

Developmental activities are those which enable students to work in depth in a particular area within the general content field. When groups are working together on a project, developmental activities can be done either by the entire group or by individual students.

Culminating activities--including evaluation--are those which help students to draw together their total knowledge of the work done. In classes which use "cooperative" or "DEMOCRATIC" learning, each student will contribute by reporting on his phase of the work so that other students can benefit. When the student has completed his culminating activities, he should have a clear idea what he has learned during the time spent and should have the "total picture" of the unit studied.

Several steps are in the recommended instructional scheme for Guided Occupational Orientation:

1) Student and teacher cooperatively review the program, and assess the student's needs in areas comprising the program.
2) Student and teacher cooperatively select objectives which will work at fulfilling the student's needs.
3) The teacher, as the instructional manager and consultant, recommends activities which will fulfill the objectives.
4) Student and teacher cooperatively develop a specific educational plan, based on available time, materials, resources, and evaluation methods.
5) Student pursues his educational plan, relying on the teacher for guidance along the way.
6) Student and teacher cooperatively evaluate the student's progress towards fulfillment of his objectives.

As noted in the previous pages, two or more teachers could be resources to a particular student. We recommend, however, that one teacher be specifically

assigned to develop individual students' programs and to coordinate his work with other teachers.

Diagnostic teaching

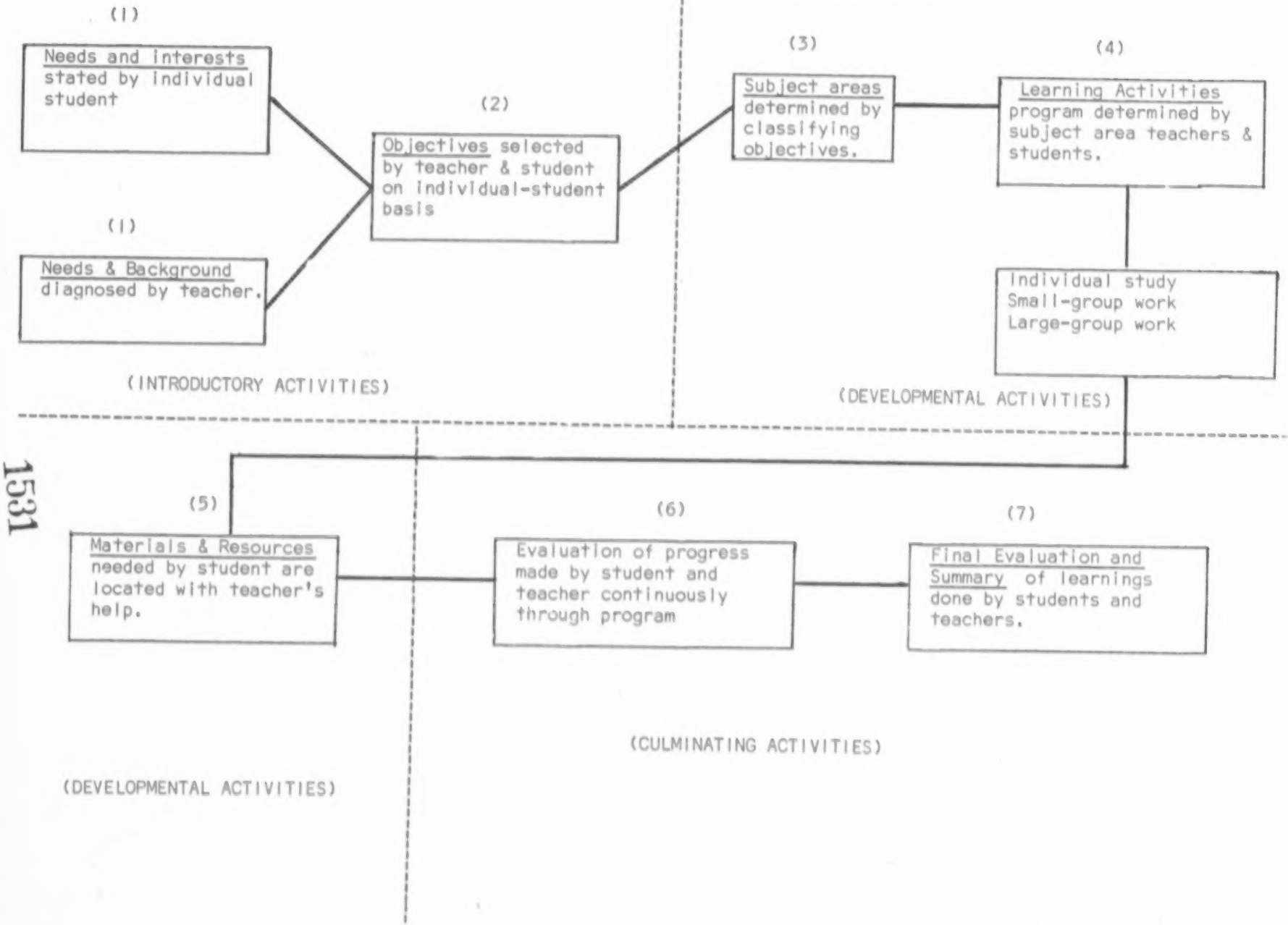
"Diagnostic teaching", as the name implies, is based on a student's and a teacher's cooperative analysis of the student's particular needs. The role of the teacher here is a guiding role--he helps the student find ways to assess his own strengths and weaknesses, interests and social needs. At the end of the diagnosing or pre-testing program, the student should have a clear picture of what objectives he needs to further his development and education.

At this point, the teacher and the student jointly pick those objectives which will advance the student. Throughout the Guided Occupational Orientation booklets, the objectives are listed on the left side of the page. It is from these objectives--plus any students and teachers may care to invent--that the student and teacher should select a few.

Next, the teacher helps the student to select activities appropriate to his needs. If a student needs extra work in composition, and is interested in auto mechanics, he would have two objectives: 1) to learn appropriate composition skills; 2) to learn about auto mechanics. From the activities on the right column of the page, the teacher would then help the student select activities which would meet these goals: to write a composition about the future role of auto mechanics, for example.

After the student completes the appropriate activity, he and the teacher should cooperatively evaluate progress towards fulfilling the objectives. How much, we might ask, has the student learned about composition-writing? How much has he learned about auto mechanics? Evaluation can even be fun, as if a student were to summarize his learning in a creative composition, "How it would feel to be a spark plug."

TEACHING-LEARNING IN THE GUIDED OCCUPATIONAL ORIENTATION PROGRAM



Polar Characteristics Distinguishing Individualizing Teaching Practices

Observed Behavior in Classrooms of Individualizing Teachers	Observed Behavior in Classrooms of Non-Individualizing Teachers
Teacher Behavior	
Objectives: The teacher pursues multiple objectives, each objective related to a specific pupil or small group of pupils.	The teacher pursues a single preselected objective, applying it without variation to all pupils in the class
Planning and Preparation: The teacher's planning and preparation are in terms of individual pupils.	The teacher's planning and preparation are in terms of some single class norm. (This norm may be the average of the three or four best pupils.)
Communication-Direction: The teacher communicates with individuals in the class while other individuals of the class remain engaged in different activities.	The teacher communicates with all pupils in the entire class at one and the same time (i.e. "out loud"), even when addressing one pupil.
Communication-Message: The teacher uses feedback information from individual pupils as a basis for modifying the message being communicated.	The teacher's preselected communication is unmodified by circumstance other than his own objectives, or by variations in its reception by individual pupils.
Function: The teacher's function is primarily observation of evidences of learning or the lack of it and the motivation and guiding of students to to independent learning activity.	The teacher functions primarily as a purveyor of information.
Evaluation: The teacher's evaluation of each pupil is based on the latter's individual growth and development.	The teacher evaluates the pupils *en masse* with a predetermined standard as the measure of success.
Pupil Behavior	
Objectives: The pupils pursue objectives which they themselves have established.	The pupils pursue objectives which the teacher has established.
Planning and Preparation: The pupil's planning and preparation have been unique in that they are engaged in independent work, study, practice, or demonstration	The pupil's planning and preparation have been by teacher's direction in that all pupils are engaged in same activity.

Communication-Direction: The pupils are engaged in small group activity in which discussion is considered a function of learning.	The pupil's participation in class is restricted to asking or answering questions of the teacher.
Communications-Message: The pupils are encouraged to manifest originality, creative productivity, and purposeful divergence.	The pupils are restricted to recitation of predigested material and to conformity.
Function: The pupils are active participants in learning activities.	The pupils are passive recipients of knowledge.
Evaluation: The pupil evaluates his own growth and development.	The pupil makes no self-evaluation, but accepts the teacher's opinion.

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Printing Trades
Electrical Trades
Sheet Metal Workers
Machine Trades
Carpentry Trades

Mathematics - Masonry

RESOURSE MATERIAL AND HANDBOOKS ON CAREER INFORMATION

Dictionary of Occupational Titles, Vol 1 & 2 (definitions of titles and Occupational Classifications) - U.S. Department of Labor - Manpower Administration. Available from Supt. of Documents - U.S. Government Printing Office, Washington D.C., - $5.00 or Library.

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Encyclopedia of Careers and Vocational Guidance, Vol 1 & 2, (Planning your Career and Careers and Occupations) Library School or Public.

Statistical Abstracts of the U.S. -Library

County and City Data Book - U.S. Dept. of Commerce Library

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Merit Student Encyclopedia - Cromwell - Collier. Ed. Corp. 1967 Vol. 1-20 - Library.

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CASSETTES AVAILABLE FROM MR. P. Dempsey - Associate, Pupil Services - Central Office
VOCATIONAL INTERVIEW CASSETTES

Your future: Wholesale and Retail Baking
as a Bank Teller (both sexes)
as a Dental Technician
as a Dispensing Optician
in a Drug Store
as a Fireman
as an Insurance Salesman
in the Internal Revenue

VOCATIONAL ENTERVIEW CASSETTES-CONTINUED
Your Future: as a Newspaper Reporter
as a Photographer
as a Production Planner
as a Real Estate Salesman
as a surveyor
as a Telephone Operator and Supervisor
as a Tool and Die Maker.
as an Appliance Serviceman
as a Body Repairman
as an Auto Mechanic
as a Service Station Attendant
as a Data Process worker
as a Licensed Practical Nurse
as a Policeman or Policewoman
as a Sheet-metal worker
as a Telephone Installer and repairman
as an X-Ray Technician

CASSETTES AVAILABLE FROM Mr. P. Dempsey - BY BOWMAR

Cabbages and Kings and Various Things
Compassion for People
Jobs for the Now Generation
The Nation's Builders

FILMSTRIPS WITH RECORDS - Available from Mr. P. Dempsey - Central Office
GUIDANCE ASSOCIATES,PLEASANTVILLE, NEW YORK

A Job That Goes Someplace
What Happens Between People
Why Work at All
Your Job Interview
Highschool Course Selection and Your Career
Preparing for the World of Work (an overview of Techincal Education)
Trouble at Work
Our Working World - Science Research Associates

FILMS AVAILABLE FROM Mr. P. Dempsey - Central Office

Jobs for Men: Where Am I Going?
Jobs in the World of Work: A Good Place to be.
So you want to be on the team?

FILMS AVAILABLE _ CONTINUED
Jobs and Continuing Education
Jobs for Women: Where are you going, Virginia.
Jobs and Interviews: Getting Started

SOME BROCHURES AND PAMPHLETS AVAILABLE ON CAREER INFORMATION

Pamphlets on a wide variety of occupations, listing type of work, skills and benefits and pamphlets on interviews etc.

N.Y. State Department of Labor, Division of Employment, N.Y. State Employment Service, 677 S. Salina St., Syracuse, New York - Also available from guidance offices. FREE

Turner Career Guidance Series - Wanting, Starting, Training, Looking for, Holding and Changing Jobs- Follet Educational Corporation, Chicago - 1967

Choosing Your Career - Guidance Series Booklet Condensation -- Science Research Associates Inc. 259 Erie Street, Chicago 11, ILlinois.

Jobs, Jobs, Jobs, Which one for You? - List of reprints from the 1970-71 Occupational Outlook Handbook, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C. 20212 FREE

Publications of the U.S. Department of Labor - (lists materials from 26 bureaus within the Dept. - many are free) Supt. of Documents, U.S. Printing Office, Washington, D.C. 20402 FREE

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

1. Independent Study

Number of class periods spent in occupational programs _____.

Number of class periods spent in independent study _____.

2. Spending of Class Time

No. of times students made decision as to how class time is spent. _____

No. of times teachers made decision as to class time _____.

3. Number of teacher planning meetings - teachers keep a record _____.

4. %of successful business and industry contacts

Name of Contact	Unfavorable	Favorable	Rating*

*Type of favorable contact: 1. Tour
2. Speaker
3. Materials and information
4. Interviews with student
5. Other _____

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Subject _____

Period _____

Group members:

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Our group is going to study _____ occupations or _____ unit in Introductory Booklet. This is what we are going to do between _____(date) and _____ _____(date). We are going to make our report to the class on _____(date).

_____will do these things: page_____ activities_____
(member or group)

_____

_____

_____

_____will do these things: page _____activities_____

_____

_____

_____

_____will do these things: page _____activities_____

_____

_____

_____

_____will do these things:page_____ activities_____

_____

_____

_____

_____will do these things: page_____ activities _____

_____

_____

_____

_____will do these things:page _____ activities _____

_____

_____

_____

GUIDED OCCUPATIONAL ORIENTATION
Syracuse City School District

Student's name _____ Subject _____
Period _____

I am going to study occupations in the _____booklet.
I would like to learn the following things about these jobs or job topics: (objectives)

_____
_____
_____
_____
_____
_____

I would like to learn these things by doing these activities from the booklet:

page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____

Student's signature _____

Teacher's comment: I would like you to learn these things by doing these activities from the booklet:

page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____
page____activity_____

Teacher's signature _____

GUIDED OCCUPATIONAL ORIENTATION

Syracuse City School District

MY CAREER PLANNER

This Career Planner deals with the different things that must be considered in looking for and planning for a job. Choose a job or career which you are now interested in and fill out this planner in relation to that job.

My Name _____

My Grade in School _____

This Career Study is on _____

Date _____

My Duties on the Job:

In this job my most common duties would be (use single words or short phrases):

_____

_____

_____

I may also need to do (other related duties):

_____

_____

_____

Working Conditions:

Physical surroundings (noisy or quiet, indoors or outdoors, hot or cold, air conditioned, etc.):

_____

_____

_____

Working conditions (steady, loss of time because of weather, seasonal, dangerous, standing or sitting on job, odd hours, tiring, heavy or light lifting, traveling, etc.):

_____

_____

_____

Personal Qualities I Would Need for this Job:

Mental abilities and aptitudes needed (how much scholastic ability, mathematical, clerical, verbal, science or mechanical aptitude, etc.).

_____

_____

_____

Physical requirements needed (active or sitting job, strength, height, weight, etc.).

_____

_____

_____

Interest requirements needed (in machines, ideas, people, outdoors, etc.).

_____

_____

_____

Education and/or Training Required:

Usual type of education (circle one).

High School	Senior College (4 year)
Technical School	Apprenticeship
Junior College (2year)	Special School or Training

Years of education after high school (circle one).

1	5
2	6
3	7
4	

Experience background required (example - typing experience for a clerk or secretary; driving experience for job as delivery man or bus driver, etc.).

_____

_____

_____

Other ways of gaining skills and/or knowledge.

_____

_____

_____

Educational or Training Opportunities:

Names and Addresses of Schools	Course Length	Yearly Cost

Local employers having on-the-job training programs (if required for this job).

_____

_____

_____

_____

Future Outlook:

Job outlook in the next ten years.

_____

_____

_____

Earnings I could expect:

_____

_____

_____

Average earnings expected.

minimum _____ to maximum _____

per hour, year, month, (circle one).

Lowest earnings reported _____.

Highest earnings reported _____.

Local earnings _____.

If an apprenticeship, earnings of beginners _____.

How would I be paid for overtime (time and a half, time off, etc.) _____.

Fringe Benefits (circle).

vacation with pay	pension plan
overtime pay	payroll savings plan
holidays off with pay	life insurance
sick leave	profit sharing
hospitalization paid wholly or in pa[illegible] by employer	discounts
	free recreational facilities

Hours I would work:

Usual hours per day _____.
Number of days per week _____.
Number of hours per week _____.
Night work (never, always, sometimes); circle one.

What I like about this job and what I dislike: (Advantages and Disadvantages):

I Like	I Dislike

There are (more, fewer, the same number of) things I like than I dislike.

Promotions that would be possible for me:

Titles of jobs up the promotional ladder - beginning as a _____, I could possibly be promoted to a _____ then to _____, then to _____.
Possibilities for the first promotion are (circle one):
poor, fair, good.

Where I would work:

Most workers in this career are found in (Circle one or more):

cities	offices
rural areas	factories
all areas	other _____

Name some cities, states or areas where most workers are found:

_____

_____

How I can measure my interests:

While in school:

Subjects I will need in this career -

_____

_____

Of these courses I like -

_____

_____

Summer or part-time jobs that would help me decide if I was interested in this career -

_____

Hobbies related to this career -

_____

High School subjects and activities that could serve as a good background:

High School subjects I should take to meet the entrance requirements of the necessary school or college, or to meet the basic requirements of a job in this area:

_____

_____

_____

Other subjects that could prove helpful:

_____

_____

High school hobbies and clubs that could be of value:

_____

Other Related Careers that I should investigate before making my final career decision:

Careers having similar duties to the one I am studying (working with people, operating machines, etc.) Name some:

_____

_____

Careers in the same industry requiring similar education or training. Name some:

_____

_____

Careers with similar working conditions of using the same tools, etc. Name some:

_____

_____

Where I can get more information:

Material to send for:

Title	Source	Address	Date	Price

Local places to visit:

_____

_____

Local workers to talk to:

_____

_____

VT 017 154
Syracuse City School
District, N.Y.
Guided Occupational
Orientation Program.

c. 2

DATE	ISSUED TO

VT 017 154

c. 2

The evaluation instrument
to this document is located
in a separate file under
the same VT number.

The Career Scene

1971-72 Vol. [illegible] NO. 2

OCCUPATIONAL EXTENSION PROGRAM!

Did you know that there was a special night school program for Senior High School students? It is called the Occupational Extension Program and it is located at Central Technical High School.

This program is primarily designed and offered to students in an academic program, or something similar where they do not have the opportunity during day school to fit these types of subjects into their schedules. These courses are open to 11th and 12th grade students, with a preference going to seniors in the case of a heavy enrollment.

The five courses being offered are:

Personal Typing
Auto Mechanics
Woodworking-Carpentry
Food Service Occupations
Photography I

These five courses provide ½ unit of credit toward graduation upon successful completion of course requirements.

Although registration was already completed on October 12, 13, 14 it still may be possible to get into a class if it is not yet filled up. Information on these programs may be obtained either through your guidance office or by clling Mr. Vernon Witmer, Principal, at either of these numbers:

476-4271 ext. 301
476-1068

Fall classes start the weeks of October 18th and 25th and continue through to Christmas vacation. These same courses will be offered during the second semester. Registration will be sometime in January. Contact your counselor to find out the exact dates.

OHIO VOCATIONAL INTEREST SURVEY

During the fall, sophomores and juniors will receive the results of the interest survey which was given last year. This survey indicates your degree of interest in general occupational areas. You will receive a booklet containing your scores and a brief explanation of your results. Sometime during the year your guidance will call you in to explain your scores to you individually. Your parents will be interested in your scores. Take your booklet home and show it to them!

In closing, if any of you have questions concerning career planning, particular jobs, training programs, or school district programs, write these questions down and submit them to your guidance counselor. We will try to answer them in our monthly newsletter.

HAPPY HALLOWEEN!!!!!!!!!!!!!!!!!!

VT 017 442
OCCUPATIONAL SURVEY 1972-1973. ERIE, HURON, AND LORAIN COUNTIES COOPERATIVE AREA MANPOWER PLANNING AREA 12.

OHIO STATE BUREAU OF EMPLOYMENT SERVICES, COLUMBUS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 72 71P.

DESCRIPTORS - *OCCUPATIONAL SURVEYS; *LABOR FORCE; *EMPLOYMENT TRENDS; LABOR ECONOMICS; *MANPOWER NEEDS; ECONOMIC FACTORS; LABOR MARKET; *MANPOWER UTILIZATION
IDENTIFIERS - LABOR FORCE PARTICIPATION; OHIO

ABSTRACT - A RESULT OF THE MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962, THIS REGIONAL OCCUPATIONAL SURVEY, COVERING THREE COUNTIES IN OHIO, WAS CONDUCTED TO COLLECT DATA TO BE USED AS A SERVICE TO EMPLOYERS, TRAINING INSTITUTIONS, VOCATIONAL COUNSELORS AND OTHERS WHO MUST PLAN FOR WISE USE OF MANPOWER. THE SAMPLE WAS DRAWN FROM A LIST OF FIRMS COVERED BY OHIO UNEMPLOYMENT COMPENSATION LAW, PLUS MAJOR NONCOVERED EMPLOYERS. FIRMS WERE GROUPED INTO THREE MAJOR SIZE CATEGORIES: (1) THOSE HAVING 165 OR MORE EMPLOYEES, (2) THOSE WITH 20 TO 164, AND (3) THOSE WITH 4 TO 9 EMPLOYEES. DATA WERE ANALYZED IN TERMS OF WORK FORCE CHARACTERISTICS, AND MANPOWER DEMANDS BY INDUSTRY. TABLES EXPLAINING FINDINGS ARE INCLUDED AS WELL AS DEFINITIONS OF THE OCCUPATIONAL GROUPS DISCUSSED. (AUTHOR/SN)

VT 017 442

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EDUCATION & WELFARE
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OCCUPATIONAL SURVEY 1972-1973

Erie, Huron, and Lorain Counties

Cooperative Area Manpower
Planning Area 12

VT017442

OHIO BUREAU OF EMPLOYMENT SERVICES
John J. Gilligan, Governor
William E. Garnes, Administrator

1550

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The Ohio Bureau of Employment Services began collecting occupational information and employment projections because of the Manpower Development and Training Act of 1962. Subsequent legislation focused additional attention on the need to correlate human development with economic growth through careful analysis of employment potential in every community. The bureau now conducts regional occupational surveys and publishes the results as a service to employers, training institutions, vocational counselors, and others who must plan for wise use of manpower. This report covers Cooperative Area Manpower Planning Area 12, which includes Lorain, Erie, and Huron Counties.

Methodology

This study was conducted by the method outlined by the federal Bureau of Employment Security (now Manpower Administration) in its Handbook on Job Market Research Methods. The sample was drawn from the list of firms covered by the Ohio Unemployment Compensation Law, plus major noncovered employers. The firms were grouped for survey purposes into three size categories--A, firms having 165 or more employees; B, those with 20-164 employees; and C, those with 4-19 employees.

During the first quarter of 1972, there were approximately 3,520 employers within Erie, Huron, and Lorain Counties; of these, 536 employers comprise our sample. The sample represents 66% of the total estimated nonagricultural labor force in the three-county area. Eighty-two per cent of the selected employers returned the questionnaires, and reported 78% of their total employment. The sample consisted of all the A firms in the area, 20% of the B firms (random selection of every fifth firm), and 4% of the C firms (random selection of every twenty-fifth firm).

After the reports were edited and checked for accuracy, we adjusted by industry the total employment figure reported by the surveyed firms, so that the total for each industry equalled the January, 1972 employment. To arrive at industry totals, we then applied the adjustment factors by industry to the specific occupational categories, the replacement data, and the projected employment total for one and two years. After final adjustment, the total employment in the surveyed occupations represented 92% of the total estimated employment for January, 1972 in the three-county area.

Data are limited to reports on occupations paying wages and salaries. They exclude self-employed, military, and domestic workers. The adjusted estimates do not represent all reporting firms because many small employers do not forecast personnel replacement needs. Estimates are based on established employers and do not reflect new businesses entering the area. The forecast figures are presented in actual numbers in order to define the size of training needs. They are employers' estimates rather than exact numbers of job openings. Projections are on a one- and two-year basis and do not necessarily show the number of openings in any specific month. For the purpose of this survey the following assumptions were made as a guide to responding firms: (1) the present long-term trend of economic growth of the United States will continue with no major setback for the next few years and (2) scientific and technological advances will continue, affecting our industrial production methods, manpower requirements, and consumption pattern.

Work Force Characteristics

The population of Lorain County has increased by 18.1% in the last decade, Erie by 11.6%, and Huron by 4.8%. The median age of the population is 25.1 years in Lorain County, 27.4 in Erie, and 26.5 in Huron, compared with 27.7 years for the state.

In 1960, the date of the latest available data, 14.1% of the people living in Lorain County, 11.3% living in Erie, and 18.1% living in Huron worked in other counties. Some commuted to one of the other counties in the area. About 9,000 worked in Cuyahoga County. About 1,300 persons living in Cuyahoga County worked in Lorain.

From 1950 to 1960, immigration added 18.8% to the population of Lorain County, 11.1% to Erie, and 2.3% to Huron. Census figures just released on immigration for 1960-70 reveal that Lorain County immigration had slowed to a 3% gain, and Erie to .7%. Huron County lost 6.6%.

National manufacturing employment declines caused by technological improvements have not affected Area 12. During January, 1972 more than 45% (55,100) of the 122,000 estimated nonagricultural employees were employed by manufacturing firms. (The term "nonagricultural employment" as used here includes all employed persons reported by individual firms, and excludes unemployed, unpaid family workers, persons employed in agriculture, forestry, and fishing, and self-employed domestics. Civilian labor force estimates quoted in this report include these workers.)

Wholesale and retail trades employed more than 15% (19,000), the services industry employed 14% (17,000), and government agencies employed 13% (16,000). These four industrial divisions accounted for 88% (approximately 107,360 persons) of the total estimated employment.

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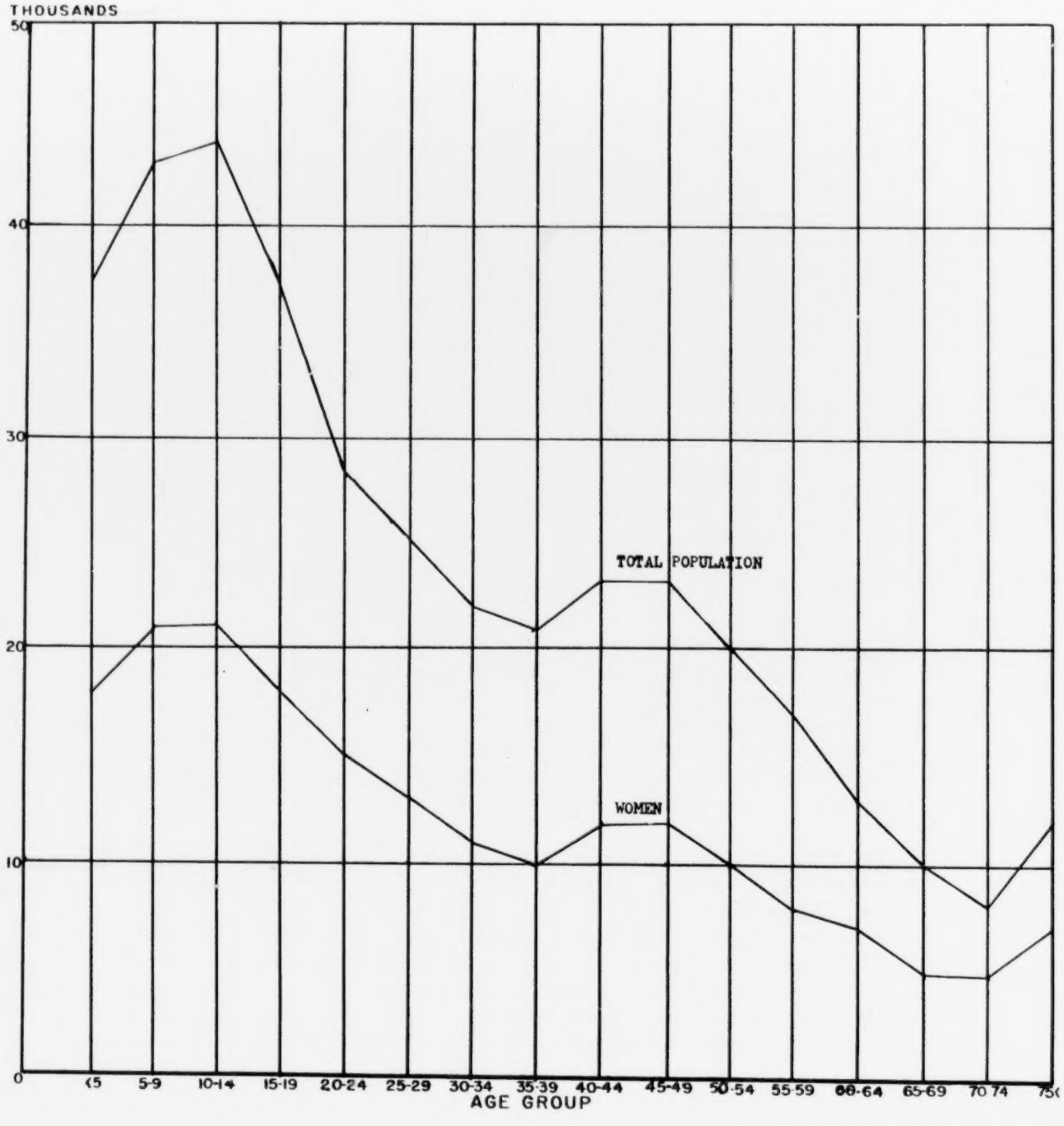
The largest occupational groups, by employment, are professional, technical, and managerial--18.6%; clerical--16.3%; structural work--13.8%; machine trades--12.9%; and service occupations--12.5%. These five groups accounted for 74% (82,852 persons) of the total 111,848 workers reported by surveyed employers.

Of the estimated 146,475 persons working in Area 12, 95,772 were employed in 1970 by firms paying unemployment insurance. The unemployment rate for all persons in Ohio was 4.0%; in the three-county area, it was 3.8%. Male unemployment statewide was 3.5%, in the area, 3.1%. In the three-county area, unemployed women exceeded the 4.9% state average, with an overall rate of 5.1%.

The April, 1970 Census indicates that the proportion of women employed in the Ohio civilian labor force was 36.5%; Erie, Huron, and Lorain Counties averaged 34.3%. Employers reported that women were employed in 72 of the 217 occupations detailed in this nonagricultural survey. Of the 39,348 working women, 90.6% were employed in services, wholesale and retail trades, manufacturing, and government. Seventy-six per cent of all clerical workers, and 62% of all people working in services are women.

POPULATION BY AGE GROUP – WOMEN TO TOTAL

Erie, Huron, and Lorain Counties
1970



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Definitions of Occupational Groups

Professional, Technical, and Managerial - This category includes occupations concerned with the theoretical or practical aspects of such fields of human endeavor as art, science, engineering, education, medicine, law, business relations, and administrative, managerial, and technical work. Most of these occupations require substantial educational preparation (usually at the university, junior college, or technical institute level).

Clerical and Sales - This category includes occupations concerned with preparing, transcribing, transferring, systematizing, and preserving written communications and records; collecting accounts and influencing customers in favor of a commodity or service. Includes occupations closely identified with sales transactions even though they do not involve actual participation.

Services - This category includes occupations concerned with performing tasks in and around private households; serving individuals in institutions and in commercial and other establishments; and protecting the public against crime, fire, accidents, and acts of war.

Processing - This category includes occupations concerned with refining, mixing, compounding, chemically treating, heat treating or similarly working materials and products. Knowledge of a process and adherence to formulas or other specifications is required in some degree. Vats, stills, ovens, furnaces, mixing machines, crushers, grinders, and related equipment or machines are usually involved.

Machine Trades - This category includes occupations concerned with feeding, tending, operating, controlling, and setting up machines to cut, bore, mill, abrade, print, and similarly work such materials as metal, paper, wood, and stone. Throughout this category, the overall relationship of the worker to the machine is of prime importance. At the more complex levels, the important aspects of the work include understanding machine functions, reading blueprints, making math-

ematical computations and exercising judgment to attain conformance to specifications. Coordination of the eyes and hands is the most significant factor at the lower levels. Disassembly, repair, reassembly, installation, and maintenance of machines and mechanical equipment, and weaving, knitting, spinning, and similarly working textiles are included in this category.

Bench Work - This category includes occupations concerned with the use of body members, handtools, and bench machines to fit, grind, carve, mold, paint, sew, assemble, inspect, repair, and similarly work relatively small objects and materials such as jewelry, phonographs, light bulbs, musical instruments, tires, footwear, pottery, and garments. The work is usually performed at a set position in a mill, plant, or shop, at a bench, work table, or conveyor. At the more complex levels, workers frequently read blueprints, follow patterns, use a variety of hand tools, and assume responsibility for meeting standards. Workers at the less complex levels are required to follow standardized procedures.

Structural Work - This category includes occupations concerned with fabricating, erecting, installing, paving, painting, repairing, and similarly working structures or structured parts, such as bridges, buildings, roads, motor vehicles cables, airplane engines, girders, plates and frames. The work generally occurs outside a factory or shop environment, except for factory production line occupations. Tools used are hand or portable power tools, and such materials as wood, metal, concrete, glass, and clay are involved. Workers are frequently required to have a knowledge of the materials with which they work, e.g., stresses, strains, durability, and resistance to weather.

Miscellaneous - This category includes occupations concerned with transportation services; packaging and warehousing; utilities, amusement, recreation and motion picture services; mining and logging; graphic arts; and various miscellaneous activities.

Definitions of Industrial Divisions

A brief description of each industrial division follows with examples in each to provide for a better understanding of the data published in this report.

Mining - This division includes all establishments primarily engaged in mining. Mining is here used in the broad sense to include the extraction of minerals occurring naturally: solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. The term "mining" is also used in the broad sense to include quarrying, well operation, milling (crushing, screening, washing, floatation, etc.), and other preparation needed to render the material marketable. Exploration and development of mineral properties are included.

Contract Construction - This division includes establishments primarily engaged in contract construction. The term "construction" includes new work, additions, alterations, and repairs. Three broad types of contract construction activity are covered: namely, (1) building construction by general contractors, (2) other construction by general contractors, and (3) construction by special trade contractors. Operative builders who build on their own account for resale or lease, and investment builders who build structures on their own account for rental, are classified in Real Estate.

Manufacturing - The manufacturing division includes those establishments engaged in the mechanical or chemical transformation of inorganic or organic substances into new products, and usually described as plants, factories, or mills, which characteristically use power driven machines and materials handling equipment. The final product of a manufacturing establishment may be "finished" in the sense that it is ready for utilization or consumption, or it may be "semifinished" to become a raw material for an establishment engaged in further manufacturing.

Transportation - (Also communication, electric, gas and sanitary services). This division includes enterprises engaged in passenger and freight transportation by railway, highway, water, or air, or furnishing services related to transportation; petroleum pipe line transportation; warehousing; telephone and telegraph communication services; radio and television broadcasting; and the supplying of electricity, gas, steam, water, or sanitary services. Industries assigned to this division are to a large extent regarded legally as having a semi-public character and are regulated by commissions or other public authorities as to the rates or prices they may charge and the services they may render.

Trade, Wholesale and Retail - The chief functions of establishments included in wholesale trade are selling goods to retail trading establishments or to industrial, commercial, institutional and professional users; and bringing buyer and seller together.

Retail trade establishments engage in selling merchandise for personal, household, or farm consumption, and rendering services incidental to the sale of goods. In general, these establishments are classified by kind of business according to the principal lines of commodities sold.

Finance, Insurance and Real Estate - Finance includes banks and trust companies, credit agencies other than banks, holding companies, other investment companies, brokers and dealers in securities and commodity contracts, and security and commodity exchanges. Insurance covers carriers of insurance, and insurance agents and brokers. Real Estate includes owners, lessors, lessees, buyers, sellers, agents, and developers of real estate.

Services - This division includes establishments primarily engaged in rendering a wide variety of services to individuals and business establishments. Hotels and other lodging places; establishments providing personal, business, repair,

and amusement services; medical, legal, engineering and other professional services; educational institutions; nonprofit membership organizations; and other miscellaneous services are included.

Government - This division includes all federal, state, local, and international government activities, such as the legislative, judicial, and administrative functions, as well as government owned and operated business enterprises.

Demand Occupations by Industry

Manufacturing:

bookkeeper; carpenter; chemical operator; clerk, general office; commercial designer; cutter, machine; cutting machine operator; draftsman; drill press operator; electrician; electronics mechanic; engineering technician; fitter; heat treater; instrument maker; job setter; machinist; metal finisher; molder; painter; patternmaker; photographer; plumber, pipefitter; power press operator; pressman, brick; salesman; sandblaster; sheetmetal worker; shipping and receiving clerk; stock clerk; structural steel worker; tool machine set-up operator.

Construction:

bricklayer; carpenter; clerk, general office; foreman; plumber, pipefitter; laborer; truck driver.

Transportation and Utilities:

assembler; central office repairman; lineman, serviceman; material handler; power plant operator; telephone operator; truck driver.

Wholesale and Retail Trades:

auto mechanic; auto service attendant; cashier; floral designer; material handler; meat cutter; plumber, pipefitter; routeman; salesman; shipping and receiving clerk; stock clerk.

Finance, Insurance and Real Estate:

accounting clerk; manager; salesman, insurance; secretary; telephone operator; teller.

Services:

accountant; appliance repairman; auto service attendant; bartender-barmaid; caseworker; child care attendant; computer operator; dietitian; janitor-maid; key punch operator; nurse, licensed practical; nurse, registered; occupational therapist; orderly; presser, garment; programer; recreation leader; secretary; systems analyst.

Government:

accountant; bookkeeper; clerk-typist; cook; dispatcher; groundskeeper; highway maintenance man; janitor-maid; kitchen helper; librarian; library page; meter reader; patrolman-guard; stationary engineer; teacher aide; water treatment plant operator.

Although growth is a key indicator of the future job outlook, even more jobs will be created by deaths, retirements, and other job separations. Employers expect continued growth to provide 3,696 new jobs in the next 12 months, and 7,651 in 24 months in all 217 occupations surveyed. Estimated personnel replacement needs are 4,848 in 12 months and 9,923 in 24. The total number of estimated staff openings is 8,544 the first year and 17,574 the second.

OCCUPATIONAL OUTLOOK

Occupation	Estimated Current Employment	Projected One-Year Openings	Description	Outlook
Accountant	206	8	Applies principles of accounting to install and maintain operation of general accounting system. Professional.	Strong demand for graduates of schools offering thorough training in accounting.
Accounting Clerk	343	32	Performs a variety of routine calculating, posting, and typing duties to accomplish accounting.	Demand expected to outpace labor-saving impact of office machines.
Announcer	32	1	Introduces various types of radio or TV programs, conducts interviews, reads news and identifies station call letters.	Limited growth due to automatic programming. Smaller stations hire beginners, especially in radio.
Appliance Serviceman	74	7	Installs and repairs appliances, following manufacturer's specifications.	Moderate growth expected as number of appliances increases. Employers are increasing efficiency of serviceman through more effective training.
Assembler	6,990	431	The job duties of an assembler depends on the product being manufactured and the process being used. The kind of tools depends on the job and the product on which work is done. There are degrees of skill required.	Moderate long run increase despite continuing automation of assembly processes. Employment sensitive to changes in business conditions particularly in plants producing autos and other durable goods.
Auto Body Repairman	244	15	Repairs damaged bodies and body parts of automotive vehicles, skilled metal craftsmen.	Increased number of accidents and styling of passenger vehicles will up demand. Lead time for training will increase scarcity of qualified repairmen.
Auto Mechanic	1,087	120	Repairs and overhauls automobiles including preventive maintenance. The complexity at some components has brought about specialization. The majority are all around mechanics.	Efforts by manufacturers and increase in number of vocational schools, as well as on-the-job training is not meeting needs. Growth will continue.
Auto Service Station Attendant	1,167	141	Services automobiles, buses, trucks and other automotive vehicles with fuel, lubricants and accessories.	Local growth has stimulated demand, replacement need is large. A good entry occupation for young men to gain experience in auto repair or sales work.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Baker	80	4	Mixes and bakes ingredients according to recipes to produce breads, pastries and other baked goods.	In large bakeries many jobs are classified as machine operator, general. In restaurants and institutions cooks may also bake breads and pastries. Opportunities are found generally in smaller bakeries or in restaurants and hotels.
Bartender	830	70	Mixes and serves alcoholic and non-alcoholic drinks to patrons of permit-holding establishments.	Growth of high class restaurants will demand better-trained and accomplished personnel. Increased number of permits will also up the demand.
Blacksmith	32	2	Forges metal bars into horseshoes and nails shoes to hooves of horses using calipers and tools. Repairs a variety of metal articles.	Many scattered over state are selfemployed About two-thirds of those employed are in industry with balance doing custom horseshoeing. Highly skilled work usually learned through apprenticeship. Modern methods reducing need.
Boilermaker	46	2	Assembles, analyzes defects in and repairs boilers, pressure vessels, tanks and vats in the field, following blueprints using hand tools and power tools.	Few firms in this area employ boilermakers. Local demand limited, although nationally outlook is good.
Bookbinder	339	10	Binds covers to books or pamphlets and performs book finishing operations. Title covers wide range of skill levels.	Limited demand expected despite mechanization in bindery occupations.
Bookkeeper	1,760	149	Keeps records of financial transactions in business establishments.	Replacement needs exceed expansion needs. Electronic data processing may account for slowing growth; however, smaller firms will continue to expand.
Bookkeeping Machine Operator	199	---	Records entries on records of financial establishments using bookkeeping machine.	Mechanical equipment is being replaced by electronic data processing except in smaller offices.
Bricklayer/Mason	176	18	Lays building materials, such as brick, structural tile, concrete, cinder, glass, and stone blocks to construct or repair walls, partitions, arches, sewers and other structures.	Shortage of housing and much activity in construction of business structures should have effect of increasing demand.
Broadcast Technician	19	---	Operates and maintains station audio and video transmission equipment in compliance with federal regulations.	Employment in the industry is expected to grow at a moderate rate. Technological improvements will limit demand.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Bus Boy	121	7	Primarily carries soiled dishes from dining room to kitchen. Depending on place may do other work to facilitate food service.	The location, size, and type of restaurant affect earnings. A good entry occupation, considerable turnover. Usually jobs are filled by younger workers.
Bus Driver	747	72	Drives bus to transport passengers over specified routes to local or distant points according to time schedule.	Expansion needs exceed replacement needs. Renewed interest in mass transportation may create more commercial traffic resulting in more drivers.
Buyer	115	6	Purchases merchandise for resale. Selects and orders, basing selection on nature of clientele. Also may be buyer for supplies and services of an organization.	Present growth slow although long-range outlook is fair. Usually a person is promoted from within.
Cabinet Maker	10	1	Constructs and repairs wooden articles such as store fixtures, office equipment cabinets and high grade furniture, using woodworking machines and hand tools.	Little change expected in this specialized type of carpentry. Work is usually done at a bench but some on site installing still done.
Cable Splicer	22	1	Splices multiple-conductor cables used in telephone and telegraph communication.	No significant gain expected. Technological changes may decrease need. Replacement needs will continue.
Candy Maker	20	3	Mixes together and cooks candy ingredients by following, modifying or formulating recipes to produce product of specified flavor, texture and color.	Demand is stabilized at present but a few openings will develop as replacements
Carpenter	711	85	Constructs, erects, installs, and repairs structures and fixing of wood, using carpenter tools and conforming to local codes.	Strong expansion needs shown which should be further stimulated by expected increases in housing starts. Many employed in other than construction.
Caseworker	193	18	Counsels and aids individuals and families requiring assistance of social service agency.	Primarily a governmental activity, although other agencies employ people to do social work. B.S. Degree usually minimum educational requirement.
Cashier	2,302	315	Receives the payments made by customers for goods and services; disburses funds.	Increase in number of establishments and change-over to self service will create jobs. Best opportunities for those with typing, bookkeeping or other clerical skills Part-time jobs also will be available.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Cement Finisher	34	2	Finishes surfaces of freshly poured concrete to specified grade and contour.	As construction picks up demand will increase. Outlook good.
Central Office Repairman	78	5	Includes installer. Tests, analyzes defects in and repairs telephone circuits and equipment in central office of telephone company, using test meters, hand tools and power tools; follows diagrams to install.	Normal growth will require some increase in employment. Although highly automated and the skill level of employees is higher, increased use will call for more people.
Chemical Operator	692	44	Controls the various pieces of equipment which convert raw materials into chemical products; responsible for carrying out instructions of supervisor in charge.	Increasing need forecast in this area as well as nationally. Instrumentation and automatic equipment increases skill requirements.
Chemist	158	6	A term applied to persons with degrees in chemistry performing analytical and research chemical work in industrial field as opposed to those working in theoretical chemistry - classed according to product or process.	Replacements will outnumber new openings Those with P.H.D. will find work in colleges.
Child Care Attendant	118	12	Cares for a group of children either in institution or day care center under supervision of director.	Institutional needs will grow slowly. Day care centers are expected to increase in numbers as more women go into the labor force and require qualified child care during working hours.
Claims Adjuster	12	1	Investigates claims for loss or damages filed in conjunction with insurance policy and tries to effect settlement out of court	Need will probably increase, unlike other jobs in insurance, due to increase in number of vehicles and population growth with accompanying needs.
Claims Clerk	32	1	Examines claims received by insurance company to determine if proper procedures were followed.	Increases in insurance coverage and medicare will create some new openings plus normal replacement.
Clerk, General Office	4,724	385	A title covering clerical workers not here identified by specific name. Many are persons performing a wide variety of clerical duties utilizing knowledge of systems or procedures. May also be a specialist.	Replacement needs are higher than expansion needs; both large. Many offer good chance for advancement. Some college graduates enter to gain experience to qualify for administrative positions.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Clerk Typist	1,154	111	Performs general clerical work requiring use of typewriter in majority of duties.	Outlook good with some expansion expected. Many seeking temporary or part time work find this a good means of employment.
Collector	64	8	Locates customers to collect overdue accounts. Notifies those with delinquent accounts by phone or mail.	Usually a more experienced person is selected for this work.
Commercial Designer	76	21	A designer creates designs or patterns consistent with material to be used. This is a term also applicable to those who draw and paint illustrations commercially.	Need will increase selectively according to field of specialization. Talented persons will usually find employment or make a place for themselves.
Compositor	260	10	Sets type by hand and machine, and assembles type and cuts in galley, for printing articles, headings, and other printed matter, determining type size and style from work order.	Considerable technological change taking place. Smaller shops using hand setting or offset. Demand will increase as economy grows.
Computer Operator	90	9	Operates on-line peripheral machines, according to instructions, to transfer data from one form to another, print output, and read data into and out of digital computer.	Staff required to operate a computer installation will be reduced as new equipment is developed, increase in number in use will create some jobs.
Concession Attendant	29	4	Induces customers to purchase food or participate in games at concession stands.	Survey made during off season. Many summer people will come into area for three or four months.
Cook	1,354	87	Prepares, seasons and cooks soups, meats, vegetables, desserts and other foodstuffs for consumption in hotels, restaurants and institutions.	Excellent opportunities. Small establishments offer most opportunities for beginners. Acute shortage of skilled cooks and chefs.
Coremaker	114	14	Makes sand cores used in molds to form holes or hollows in castings.	Title includes both hand and machine coremakers. Present moderate need will increase.
Crane Operator	761	30	A term applied to workers operating cranes using sling electromagnet, grapple hook, bucket demolition ball and clamshell. Includes power shovel operators and related.	Increasing demand expected as construction picks up. Many work in mills and factories. Jobs usually filled by promotion from within.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Credit Clerk	101	11	May process new applications, send letters to customers with delinquent accounts, accept payments on accounts, keep records of loans and accounts or may specialize in any one of above.	Steady demand for persons with aptitude to get delinquent customers to keep up payments. Need will grow as business activity increases.
Cutter, Machine	149	16	Tends machine that cuts materials such as braid, cardboard, cloth, strands of wire, or tape to specified dimensions.	Less than average growth.
Cutting Machine Operator, Fabrics	47	11	Cuts multiple layers of fabric into parts for articles, using portable electric cutter, following pattern.	Employment will reflect normal growth.
Developer	158	4	Develops exposed photographic film or sensitized paper in series of chemical baths to produce negative or positive prints.	Technological advances have resulted in a declining need. Some replacements will continue to be required.
Dietitian	42	7	Plans and directs food service programs in hospitals, schools, restaurants and other private or public institutions.	Shortage occupation. Increasing opportunities for full-time and part-time work. Growth related to expansion of hospitals and nursing homes.
Dispatcher, Radio	51	16	Broadcasts orders to radio patrol units to investigate complaints and relays instructions or questions from remote units. In some areas coordinates all police, fire, ambulance and other emergency requests, usually holds federal license.	Some growth as governmental agencies augment forces to meet rising crime rates and vehicle accidents.
Dispatcher, Vehicle	180	7	Acts as coordinator for all types of vehicles transporting people and goods to insure most efficient use and safety.	Only moderate changes expected in rate of employment. Some shift toward increased number of women can be expected.
Displayman	13	1	Displays merchandise such as clothes, accessories and furniture in windows and showcases.	Applicants must demonstrate some artistic ability. Only moderate demand expected.
Doorman/Usher	133	8	Assists patrons of hotels, restaurants and theaters.	A few doormen make good money in tips from patrons, but generally low-paying work.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Draftsman	491	51	Prepares clear, complete, and accurate work plans and detail drawings from rough or detailed sketches or notes for engineering or manufacturing purposes, according to specified dimensions. Classifications are made according to type of drafting.	Favorable prospects, especially for those having post-high school training. Well-qualified high school graduates in demand for some types of jobs.
Drill Press Operator	80	8	Operates previously set-up drilling machines, such as single-or multiple-spindle drill presses on production basis.	As industrial production picks up increased need is anticipated. Automatic machines have limited demand.
Dry Cleaner	200	13	Operates machine to dry clean garments, drapes and other materials that cannot be washed in water. Removes spots by hand.	Not a vigorously growing occupation. Self-serve machines and modern fabrics will affect future need.
Duplicating Machine Operator	31	3	Reproduces handwritten or typewritten matter using duplicating machine. The number of makes and different processes complicates interpretation of employers definition of this title.	Replacement need will be main demand in near future, although more offices will be doing their own duplicating.
Electrician	1,271	73	Follows local code for installation and repairs of wiring, electrical fixtures, apparatus and control equipment. May be required to hold license. May specialize in construction or maintenance.	Industrial and home construction stimulates demand. Completion of apprentice program usually required.
Electronics Technician	66	2	Works with engineers and scientists in the field of electronics, does complex technical work more difficult than routine operation and repair.	Growth of technical schools has caused a redefinition of this occupation and also made available more technicians through two-year training courses. Outlook not well defined.
Electronics Assembler	190	9	Assembles electronic equipment such as computers, movie sound recorder, radar, and sonar, usint electronic test equipment, hand tools and power tools following blueprints, wiring diagrams and manufacturers' standards.	Present lull expected to be only temporary. Forecast indicates strong growth and replacement needs.
Electronics Mechanic	121	21	Repairs electronic equipment such as computers, industrial controls, radar systems and missile control systems, transmitters, antennas and servomechanisms.	Good expansion growth in proportion to number employed. Much experience or technical school training required.

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Employment Security Specialist	94	4	Interviews job applicants in employment agency and refers them to prospective employers for consideration, includes other closely related activities such as job development and counseling.	Replacements will create openings for those with good background either in education or experience.
Engineer	1,272	41	A term applied to persons who have completed one or more disciplines to qualify for the area of specialization chosen in an almost infinite variety of fields.	Opportunities run from excellent to bad depending on area of specialization.
Engineering Aide	13	2	Prepares manuals, parts lists and descriptions;assigns numbers. Keeps records.	Should be person with wide experience in particular industry. Moderate need and usually met by promotion from within.
Engineering Equipment Mechanic	133	8	Same as heavy equipment mechanic. Repairs and adjusts heavy construction equipment of all types.	Demand fluctuates as amount of construction varies. Work may require considerable mobility to service equipment on worksite.
Engraver	10	1	Loosely applied here to cover all persons engaged in using tools to make letters or ornamental designs on metal surfaces.	In most cases an apprenticeable occupation. Present work force expected to be able to handle work.
Estimator	45	4	Prepares cost and work completion estimates for construction and manufacturing establishments.	Usually a person with considerable knowledge of materials and processes. Often leads to middle-management jobs.
Extruder Operator	95	24	Sets up and operates machine to extrude or coat a variety of products depending on material and specification	For one with good mechanical ability and experience this occupation offers good opportunity.
File Clerk	14	3	Files correspondence, cards, invoices, receipts and other records in alphabetical or numerical order, or according to subject matter, phonetic spelling or other system.	Modern office methods of electronically storing data and microfilming of records reduces need for manual filing. As a result demand will lessen and need will be confined to replacement.
Filling Machine Operator	308	12	Tends machine that performs one or more packaging functions. Any industry.	Growth of packaging has been phenomenal Practically all bulk items are now marketed in this way. May be liquid or dry. Employer trains.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Firefighter	559	20	Controls and extinguishes fires, protects life and property, maintains equipment as employee of city, township or industrial plant. Inspects building for fire hazard and compliance with code.	As suburbs continue to grow more equipment will need to be stationed in new firehouses. New factories will also need protective equipment.
Fish & Game Warden	30	2	Patrols assigned area to prevent game law violations, investigate reports of damage to crops and property by wildlife and compiles biological data.	Recent recognition of necessity to protect our environment has added to the responsibilities of natural resource people.
Fitter	88	18	Lays out, positions, aligns and fits together fabricated parts of structural metal products in shop according to blueprint and lay-out specifications preparatory to welding or riveting.	Locally growth is expected within limits of size of the force. Outlook good.
Floral Designer	63	20	Designs and fashions floral pieces and decorations.	One of the occupations included in the agribusiness courses of vocational education. Moderate growth expected, some artistic ability required.
Foreman	1,614	70	Supervises and coordinates activities of workers engaged in one or more occupations. Classifications are made according to process involved, craft of workers supervised, product manufactured or industry.	Most foremen rise through the ranks, thus having a good knowledge of work to be performed. Most competent move up to higher management. Some hired because of supervisory or management training. Outlook good.
Furnace Operator	206	24	Controls gas, oil, coal, electric arc, or electric induction furnace to melt or refine metal. Title includes ceramic and related processes.	Usually work up from helper. Outlook is good for those able to work in heat usually found near furnaces.
Furniture Finisher	27	2	Finishes or refinishes damaged, worn or used furniture or new high-grade furniture to specified color or finish utilizing knowledge of wood properties, finishes and furniture styling.	Some self-employed or in small shops not included here. Most work at refinishing as factory methods eliminate hand work. Demand limited.
Groundskeeper	194	10	Maintains grounds of industrial, commercial or public property such as golf courses, performing a combination of tasks such as cutting, trimming, planting, raking and pruning.	Trend toward beautification of public and industrial grounds and increase of parks will keep demand at a high level. Many self-employed do contract work.

Heat Treater	83	13	Controls heating furnaces and quenching equipment, to alter physical and chemical properties of manufactured products by hardening, tempering, annealing, anodizing, casehardening and normalizing.	As additional products are being manufactured and either protective or decorative finishes are required and tools with better cutting edges are needed this occupation will grow.
Heating & Air Conditioning Mechanic	22	1	Work on heating and cooling equipment used in homes, offices, public buildings doing both installation and maintenance.	A shortage occupation. Building increases plus replacement of old equipment will call for more experienced mechanics. Many self-employed.
Highway Maintenance Man	244	13	Maintains highways, roads, and rights of way. Must be able to do many kinds of work.	A permanent force works year-round but during summer months many extra workers are hired. Number of workers depends on amount of money budgeted.
Housekeeper	199	30	Supervises work activities of cleaning personnel to insure clean, orderly, attractive rooms in hotels, hospitals, and similar establishments.	Extensive growth of public lodging and medical care facilities will assure excellent opportunities.
House Parent	15	1	Cares for a group of children housed in an institution, under supervision of superintendent.	Some increase as population grows. Hiring will be primarily for replacement.
Industrial Truck Operator	773	46	Drives wheeled vehicle equipped with fork lift, elevating platform or hitch, to push, pull, lift, stack or tier merchandise, equipment or bulk material in warehouse, storage yard or factory.	Mechanized handling of goods promises increase in number and replacement need is high. Often is an entry occupation.
Inspector/Tester	1,211	77	Examines parts or products for flaws or defects. Checks dimensions, tests subassemblies and assembled products using micrometers, specially designed gauges and other testing instruments, where appropriate simple visual inspection.	Present consciousness of quality of items sold and need of manufacturers to maintain standard of goods sold will prompt better control of quality. Usually jobs are filled by promotion from within.
Instrument Maker	44	7	Fabricates, modifies, repairs mechanical instruments or mechanical assemblies of electrical or electronic instruments.	Continued development of new products for measuring, recording and controlling will furnish excellent opportunities, also for those specializing in repair.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Investigator	27	1	Investigates background and personal characteristics of persons applying for credit, employment, insurance or adjustments.	Conditions are generally favorable for increased need although local demand is small.
Janitor/Maid	3,525	370	Keeps hotel, office building, apartment house or institution in clean, orderly condition. Men may tend heating plant. Present trend toward hiring a contracting firm to provide required services. New titles for same work are appearing.	Opportunities expand and work becomes more complex with new electrical appliances and chemicals. Besides replacement and expansion there is a relatively high turnover.
Job Setter	131	13	Sets up a variety of machine tools for production workers, machines first-run work piece. May instruct new workers in machine operation.	Qualified men will find ample opportunities for employment as industry continues to expand.
Key Punch Operator	189	20	Operates alphabetic and numeric key punch machine similar in operation to electric typewriter to produce punch cards with data.	Outlook good with both replacement and expansion needs reported.
Kitchen Helper	1,559	144	Performs any combination of duties to maintain kitchen and work area: sweeps, washes, removes trash, maintains silverware and transfers supplies, peels and prepares vegetables.	Traditionally a job for those with little education although those intending to learn business are usually required to start here. Many find part-time work during peak times. There is usually a high turnover.
Laboratory Helper	69	2	May perform a variety of duties: sets up and operates grinding, mixing and sifting machines to test their conformance to customer specifications; cleans glassware and other laboratory apparatus.	High school graduates excelling in chemistry or physics are usually considered for job openings. Limited demand.
Laboratory Tester	367	14	Performs standardized tests to determine quantity or quality of physical or chemical properties in products or raw materials using laboratory equipment.	Employers do not specify type when reporting. Probability of increased need is good. Private and public employers will increase control over quality.
Laborer	5,991	457	An occupational grouping including most jobs of low complexity except clerical and sales. Usually minimal training required, although in some cases educational background is considered.	Heavy turnover and seasonal nature of some jobs make many openings available at certain times. Laborers in union shops usually have good rates of pay.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Laundry Worker	671	35	Tends laundering machines to clean articles and performs other operatins as required in commercial laundry.	Local demand confined to replacement needs.
Layout Man	345	8	Lays out reference points and dimensions on sheets, plates, tubes and structural shapes for fabricating, welding and assembling into structural metal products. May vary according to material being fabricated.	Present needs confined to replacements although upturn in business could change picture quickly.
Lens Grinder	29	2	Fine grinds and polishes surfaces of lenses to specifications.	Present demand limited to replacement. Entrants usually trained by employer. An apprenticeable trade.
Librarian	111	9	Maintains library collection of books, periodicals, documents, films, recordings and other materials and assists groups and individuals to locate and obtain desired materials.	Prospects good, school librarys are expanding absorbing graduates.
Library Assistant	161	8	Compiles records, sorts out and shelves books and issues and receives library materials.	Colleges in area and public libraries are all expanding providing additional employment.
Library Page	42	9	Works as stock clerk, locates books, periodicals and pictures for loan and replaces material according to system.	Many libraries going to open stacks may reduce need.
Lineman	378	23	Erects and maintains transmission equipment for utilities, also may be employed by contractors. Many specialize in one phase of work.	Keeping pace with population growth, improvements in technology and maintaining present equipment will provide both growth and replacement demand. Calls for men in good physical condition.
Loan Counselor	127	2	Analyzes loan contracts and attempts to obtain payment of overdue installments. May be person administrating loan accounts of college or university.	Replacements are only openings expected. Some cut back indicated.
Machine Operator, General	4,957	246	A term used to designate any worker who tends machines to change shape or condition of raw material where primary task is feeding or offbearing, covering a wide range of products. Job is usually designated by name of machine.	Good source of employment for unskilled applicants as demand for operators in all manufacturing establishments will grow with the economy. Automation is replacing some jobs.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Machinist	1,162	118	Sets up and operates machine tools to close tolerances, has working knowledge of usual machines found in machine shops. Applies knowledge of mathmatics, metal properties and layout machining procedures.	Contrary to national demand there is a need for craftsmen with well-rounded experience in metal fabricating industries. An apprenticable occupation. Many now working are older men nearing retirement age.
Mail Carrier	437	19	Sorts mail for delivery and delivers mail on established routes.	Most openings for city carriers. As population increases and size of urban area grows, more carriers will be required.
Mail Clerk	270	11	Receives letters and parcels, provides service at sales window, sorts mail.	Mechanization will slow new hires except for replacement. As new methods of handling are perfected the demand will become more clear.
Maintenance Man, Building	530	28	Repairs and maintains physical structures of commercial and industrial establishments using hand and power tools.	Considerable expansion expected by present employers which will be augmented by newly constructed buildings. Self-employed not included.
Maintenance Mechanic	1,199	55	Repairs and maintains in accordance with diagrams, sketches, operation manuals and manufacturers specifications, machinery and mechanical equipment, using hand tools, power tools and precision-measuring instruments.	Rapid growth in need will improve outlook in future as industries continue to grow and equipment becomes more complex.
Manager/Official	5,094	253	This category includes all managers and officials who are responsible for policy making and administration of business and governmental establishment.	Growth outlook is good with other opportunities for aspirants coming from large number of older people reaching retirement age. Increasingly beginning managers are required to be college grads although some still work up from ranks.
Material Handler	1,138	64	Loads, unloads and conveys materials within or near plant, yard or worksite, performing a combination of warehousing duties.	General trend is down in demand but local needs remain high. Mechanical equipment and modern methods replacing need for men but increase in number of firms has offset advancements.
Meat Cutter	616	59	Cuts and trims meat to size for displaying or as ordered by customer, using hand tools and power equipment or prepares meat for processing.	Good opportunities. Supermarkets and prepackaging plants are now best source of employment. Some are employed in processing plants.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Medical Laboratory Assistant	113	7	Performs routine tests in medical laboratory for use in treatment and diagnosis of disease. May specialize in some particular area.	Many now employed received on-the-job training. Trend is toward hiring two-year technical school graduates. Replacement need higher than expansion.
Medical Technologist	58	4	Performs chemical, microscopic and bacteriologic tests to provide data for use in treatment and diagnosis of disease. Usually designated according to field of specialization.	Must be registered with degree from accredited school. Outlook good as technology becomes more complex.
Messenger	13	1	Delivers messages, documents, packages, and other items to offices or departments within establishments or to other business concerns.	An entry occupation with little prospect of growth.
Metal Finisher	621	31	Finishes surfaces of metals by grinding, filing, buffing, and sanding, using hand or power equipment and knowledge of metal finishing techniques.	New developments in metallurgy have slowed growth. Replacement needs will continue.
Meter Reader	59	4	Reads and records electric, water or steam consumption meters at regular intervals.	No significant growth expected as methods are developed to decrease workload.
Meter Repairman	20	---	Installs, adjusts and repairs volumetrical gas, oil, or water meters and time meters.	No significant growth expected as methods are developed to reduce workload.
Mill Operator	313	17	A term applied to a number of different machine operators who reduce materials so that they are ready to process in manufacturing plants.	Many manufacturing processes require some sort of a millman with no growth projected.
Millman, Grain	63	3	Tends machines that grind, cut, crimp, shell, or roll grain, hay, corncobs and screenings for stock and poultry feed.	Usually found in feed and grain elevators with other duties complementary to customer needs. Replacement demand only.
Millman, Rubber	29	4	Tends mills to knead mix and blend rubber for further processing.	Statewide demand good with numerous plants where rubber is processed. Local need limited although a few openings develop.
Millwright	509	23	Installs machinery and equipment according to layout plans, blueprints in an industrial establishment, using hoist hand tools and power tools	Slow increases, related to new plants, additions of new machinery, changes in plant layouts and maintenance of increasing amounts of heavy equipment.

Mixer/Grinder	59	2	Depending on product produced, blends, mixes, solid or liquid ingredients to make products such as paints, lacquers, putty, inks and pigments following formula.	Relatively unskilled workers find this a means of employment. Relatively slow growth expected, openings confined to replacement needs.
Model Maker	98	1	Constructs models to scale according to specifications using woodworking and metalworking machines and hand tools.	A specialized type of work not widely distributed. Slowness in aircraft industry is mainly responsible for lack of demand.
Mold Press Operator, Plastics	66	4	Sets up and operates mold press that automatically casts plastic from molten materials.	Moderate demand forecast by employers. Some slowness in evidence at present.
Molder	355	33	Forms sand molds for production of metal castings using hand tools, power tools, patterns and flasks applying knowledge of variables. Some operate machine that molds nonferrous part.	Local demand will provide work for an increasing number of molders.
Nurse Aide/Orderly	930	55	Assists in care of hospital or nursing home patients, under direction of nursing and medical staff.	Plentiful opportunities. Growth projections in health service fields indicate that rapid increase in numbers will continue in hospitals, nursing homes and geriatric facilities.
Nurse, Licensed Practical	1,032	156	Cares for patients and inmates in private homes, hospitals, sanitariums, industrial plants and similar institutions. Licensed by State Board.	Shortage of R.N.'s and building of new facilities will create strong demand, probably greater than output.
Nurse, Registered	1,056	197	Renders general nursing care to patients ranging from general duty and public health nursing to highly specialized clinical specialists.	Shortage occupation. Demand expected to continue to exceed supply during foreseeable future. Keen competition between hospitals, nursing homes and industrial plants will continue.
Occupational Therapist	9	5	Plans, organizes and participates in medically oriented occupational program in hospitals or similar institution to rehabilitate patients who are physically or mentally ill.	Increased need forecast which may result in a shortage.
Office Machine Operator	88	2	Consists of a wide range of different machines designed to speed up office work not otherwise specifically mentioned in this report.	Electronic equipment is slowing demand although smaller offices will continue to use.

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Oiler	27	1	Oils and greases moving parts of mechanical equipment, according to specified procedures and oral instructions.	In many cases an entry occupation leading to mechanic helper. Primary need for replacements.
Operating Engineer	838	28	Operates various type of power driven heavy equipment usually in construction such as compressors, tractors, scrapers, earth movers to excavate and grade earth.	Present slow growth will increase influenced by rate of highway construction, new building subdivisions and industrial construction.
Packer/Wrapper	574	20	Packages materials and products by hand, wraps protective materials around products.	Opportunities in both manufacturing and wholesale and retail trade will be moderate but replacements will be needed.
Painter	130	31	Applies coats of paint, varnish, stains, enamel or lacquer to interior or exterior surfaces, trimmer or fixtures, doing caulking or puttying and minor repairs.	As construction of houses, apartments, offices and manufacturing facilities increase, demand will increase.
Paper Machine Operator	148	4	Controls the "wet end" of machine where paper of a specified thickness, width and physical strength is formed, supervises the rest of crew to maintain smooth flow of material.	Minimal amount of growth expected; replacements will exceed expansion needs.
Pasteurizer	11	1	Tends equipment that pasteurizes and processes milk and other liquids.	Limited demand, modern equipment may reduce need.
Patrolman/Guard	818	41	Patrols assigned beat on foot, vehicle or horseback to control traffic, prevent crime or disturbance of the peace and arrest violators, including supportive personnel. May work for private firm to patrol assigned area.	One of the best sources of employment for qualified individuals. Many new inducements being offered, specialists becoming more essential.
Patternmaker	76	10	Lays out, machines, fits and assembles castings and parts to make a metal foundry pattern. Other pattern makers are designated according to product, such as wood or plastic.	A highly skilled worker. Present need slowed but some expectation of increased future need.
Personnel Clerk	81	3	Compiles and keeps personnel records.	Little change expected.
Personnel Interviewer	359	9	Employment interviewer in either agency or company determines suitability of applicants for consideration.	Opportunities primarily for replacement needs. Upgrading is usual source.

Pharmacist	159	8	Compounds and dispenses medications following prescriptions issued by physician or other authorized medical practitioner. Some are research specialists	Professional, many self employed and not included here. Growth of hospitals, pharmacies and public health facilities will create new openings.
Pharmacy Helper	26	4	Mixes pharmaceutical preparations, under direction of pharmacist, issues medicines, labels and stores supplies, and cleans equipment and work areas in hospital pharmacy.	Moderate growth as new hospital facilities are completed. Replacements will also be required.
Photographer	32	3	Photographs persons, merchandise, exteriors, interiors, machinery and fashions. Many free lance photographers not included in this survey.	Competition keen in portrait and commercial fields. Some demand will continue for industrial photographers.
Physical Therapist	38	3	Treats patients with disabilities, disorders and injuries to relieve pain, develop or restore function and maintain maximum performance using physical means, such as exercise, massage, heat, water, light and electricity as prescribed by physician	Locally the need is limited but generally excellent prospects. Demand expected to exceed supply as rehabilitation services expand.
Physician	101	---	One with degree of doctor of medicine.	Number of physicians employed expected to decrease locally.
Plasterer	73	2	Applies coats of plaster to interior walls, ceilings, and partitions of buildings according to architects drawings, or oral instructions.	New hires will be confined to replacement needs, number employed expected to decrease.
Plater	134	5	Sets up and controls plating equipment to coat metal objects electrically with chromium, copper, cadmium, or other metal to provide protective or decorative surfaces or to build up worn surfaces according to specifications.	Within limits of size of industry good growth is expected. Some are apprenticable jobs, others learn on-the-job.
Plumber/Pipefitter	658	91	Assembles, installs and repairs pipes, fittings and fixtures of heating, water, drainage systems according to specifications and codes. Also employed in industrial plants in a variety of different job titles.	Rapid growth as construction increases. Maintenance, repair and modernization of existing plumbing and heating systems will create additional jobs.

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Power Plant Operator	157	12	Operates boilers, turbines, generators, and auxillary equipment at generating plant to produce electricity.	Local growth will be moderate but new plants in or close to this state will provide many new openings.
Power Press Operator	949	81	One who operates one or more power driven presses that cut, bend, punch, trim, forge or rivet materials to shape, fabricate, or assemble them.	Made up of jobs of varying complexity. Outlook good with openings for new entrants expected.
Presser, Garment	224	27	Operates a pressing machine to smooth surfaces, flatten seams, or shape articles such as garments, drapes, etc. in manufacturing establishments.	Moderate demand plus turnover will provide openings for those interested. Operators in small shops not included here.
Pressman, Brick	83	27	Operates machine to press clay into products such as brick and tile.	Moderate increase as volume of printing and use of color expands requiring larger and more complex presses.
Pressman, Printing	442	32	A term applied to workers who make ready and operate printing presses to produce printed matter.	Moderate increase as volume of printing and use of color expands requiring larger and more complex presses. Technological improvements will limit growth.
Pressman, Rubber	230	9	Tends heated presses that mold and cure rubber goods and parts.	Present limited demand expected to improve moderately. New entrants learn on the job.
Production Clerk	218	10	Compiles data from customers orders, production estimates and perpetual inventory to prepare production schedule.	Electronic data processing is taking a toll on this occupation. Larger firms are going almost entirely to this type of control of production and inventory.
Programmer	78	14	Selects symbols for coding system peculiar to make or model of digital computer and applies them to successive steps of completed program for conversion to machine processing instructions.	Firms using computers to process business records and control manufacturing processes will have largest increase. Science and engineering programs will increase.
Projectionist	48	2	Sets up and operates motion picture projection and sound producing equipment to produce coordinated effect on screen.	Little or no activity expected although some new theaters are planned.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Proof Machine Operator	79	7	Sorts, records and proves records of bank transactions such as checks, deposit slips and withdrawal slips, using proof machine.	Employers forecast a small expansion however as processes are perfected automation will take over.
Proof Reader	12	---	Reads typescript or proof of type set up to detect and mark for correction any grammatical, typographical or compositional errors.	Openings usually filled by upgrading from within.
Radiologic Technologist	98	8	Applies roentgen rays and radioactive substances to patients for diagnostic and therapeutic purposes. May include industrial applications.	Some expansion as more uses are developed and new facilities are constructed.
Receptionist	37	5	Receives clients or customers coming into an establishment, ascertains their wants and directs them accordingly.	Although not much need is shown, usually applicants with clerical training are hired and are promoted after learning the firms procedures.
Recreation Leader	178	31	Conducts recreation activities with assigned groups in public department or voluntary agency.	Some expansion is expected as cities grow it is necessary to have more supervised recreational activity.
Reporter/Writer	95	3	Collects and analyzes facts about newsworthy events and writes stories conforming to prescribed editorial techniques and format; literary writers and editors are included if salaried.	A good field for those with talent and training. A number of free lance writers not included.
Roofer	200	8	Covers roof with roofing materials, other than sheetmetal, such as composition shingles or sheets, wood shingles or asphalt and gravel to make them waterproof.	Technological innovations may limit growth somewhat. New hires will be limited to replacements.
Routeman	739	30	Covers established route to deliver, sell and display products or render service.	Employment which declined during the 1950's will increase as suburban areas create demand for home deliveries.
Salesman, General	1,779	164	Sells merchandise to business or industrial establishments or to individuals at sales office, store, showrooms, or customer's home or place of business.	New products, wider distribution and greater customer demand will all contribute to the overall need for salesmen. Expansion will be significant. Demand strong for those trained to handle technical products.

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OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Salesman, Insurance	215	45	Sells insurance to new and present clients recommending amount and type of coverage, based on analysis of prospects' circumstances. Licensed.	A wide range of entry qualifications depending on type of insurance sold. A good field for those with temperament and ability to work with people. Highly competitive.
Salesperson	3,915	279	Displays, describes and sells merchandise, utilizing general knowledge of the products sold; sells items from sales floor.	Many opportunities for full and part time. Employment will increase more slowly than volume of sales. Most demand for workers skilled in salesmanship.
Sandblaster	61	15	Directs blast of abrasive laden compressed air or water from nozzle against metal or hard composition objects to remove adhering scale, sand, paint, grease, tar, rust and dirt to impart even finish.	Continued expansion in the metalworking industry will afford increased job opportunities for sandblasters.
Seamstress/Tailor	81	7	Makes, alters, repairs garments such as suits, coats, dresses, or skirts according to pattern or customers specification using sewing machine or by hand sewing.	Usually those hired must have training and experience. Long term outlook is for growth as business continues to improve and expand. Many work at home or in small shops and are self employed, therefore not counted.
Secretary	1,658	171	Schedules appointments, gives information to callers, takes dictation and otherwise relieves officials of clerical work and minor administrative and business detail. Usually has advanced training.	Nature of work calls for more education or experience than stenographer but wages and working conditions are better. Almost unlimited opportunities for those who are able to qualify.
Sewing Machine Operator	228	28	Operates various sewing machines to join, gather, hem, reinforce, or decorate product, such as garments, upholstery, awnings, or textile bags, makes button holes or attaches fasteners to fabrics.	Local demand for both expansion and replacement good. There is usually a fairly high turnover rate which increases need. Entrants usually need training in order to qualify.
Sheetmetal Worker	761	38	Fabricates, assembles, installs and repairs sheetmetal products and equipment according to job orders and blueprints.	Number of jobs will expand in manufacturing although as construction picks up there will also be openings created.
Shipping/Receiving Clerk	497	64	Receives, stores, issues and ships materials and products and keeps inventories and stock records.	Outlook good with chance for promotion for those who acquire knowledge of products and methods.

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Sign Painter	45	2	Writes, paints, or prints signs or show-cards. May cut out letters and signs for display purposes.	Many are self-employed and not covered in this report. Some feeling for form and design required. Demand limited to replacements.
Small Engine Repairman	21	1	Repairs fractional horsepower gasoline engines and related equipment.	Wide use of small engines on all type of labor saving equipment has created a big demand for good mechanics. Many self-employed in small shops not reported.
Spray Painter	361	12	Applies paint using spray equipment in either production work, repainting or maintaining surfaces with protective material.	Present low demand will reverse as economy begins to return to higher level.
Stationary Engineer	167	10	Operates and maintains stationary engines and mechanical equipment to provide utilities such as light, heat or power for buildings and industrial processes.	Some increase in employment expected although replacement will provide most openings. Automatic equipment may cut needs in new installations.
Statistical Clerk	81	6	Compiles and tabulates statistics for use in statistical studies.	Increase in use of computers will limit growth although a fairly large number will still be required.
Statistician	11	1	Plans surveys and collects, organizes, summarizes and analyzes numerical data, applying statistical theory and methods.	Needs in this area diminishing, otherwise opportunities look good in industry, government and in education.
Stenographer	452	31	Takes dictation in shorthand and transcribes dictated material using typewriter. May perform a variety of other clerical duties as required.	Splendid opportunities for those with stenographic training.
Stock Clerk	1,240	170	A title under which numerous occupations are classified because of similar basic duties. Receives, stores and issues equipment, material, supplies, merchandise or tools and compiles stock records in stockroom.	Playing an essential role in almost every type of industry stock clerks will continue in demand and as industry grows so too will the need for stock clerks. Many are promoted to higher positions.
Structural Steel Worker	185	19	Works as a member of a crew to raise, place and unite girders, columns and other structural steel members to form completed structures or structural framework.	Demand in this area primarily in manufacturing. Usually construction shows largest need and increase in building will provide more openings.

Surveyor	16	---	Surveys earth's surface and oversees engineering survey party engaged in determining exact location and measurements of points for construction, mapmaking, land valuating, mining or other purposes.	Best prospects for persons having post-secondary school training in surveying. Demand will be stimulated by expanding construction of all kinds. Many are self-employed.
Systems Analyst	128	13	Analyzes problems to refine their formulation and convert to programmable form for application to electronic data processing system.	A shortage occupation requiring much education and experience.
Tabulating Machine Operator	20	1	Operates machine that processes data from tabulating cards to printed records.	Switch by many establishments to digital computer has not completely eliminated need for machine processing of data.
Teacher	7,591	410	Due to professional training required all teaching is placed in one category for reporting here, includes elementary, secondary, college and special.	Demand remains high especially for replacement needs. Supply in this area is larger than demand, except for some specialists.
Teacher Aide	414	36	Performs nonprofessional tasks to assist elementary school teacher.	A relatively new occupation gaining wider acceptance. Usually training required.
Telephone Operator	467	51	Operates telephone switchboard to establish or assist customers in establishing local or long distance telephone connections. Includes operators in business establishments who may perform clerical duties.	Growth in phones will create new openings, also replacements will be needed. PBX installations will provide many of the openings as new and larger office buildings go up.
Television Repairman	21	2	Repairs and adjusts radios and television receivers, using hand tools and electronic testing instruments. Many self employed and those in small shops not included.	Majority are self-employed and not reported. Larger firms with repairmen on payroll will continue with present number.
Teller	931	103	Receives and pays out money. Records all transactions of money and negotiable instruments involved in various bank transactions.	Rapid growth as banks expand services to urban population. Increasing proportion may be part time for peak hours.
Timekeeper	87	3	Keeps daily record of arrival and departure time of employees, may prepare payroll, computing earnings and withholdings.	A decrease in total employment as technological advances replace hand computing and record keeping. Some replacement need shown.

ERIC

OCCUPATIONAL OUTLOOK IN BRIEF (Continued)

Title Examiner	35	7	Searches public records and examines titles to determine legal conditions of property title.	Local expansion is forecast - a close parallel with demand for lawyers.
Tool & Die Maker	821	77	Analyzes variety of specifications, lays out metal stock, sets up and operates machine tools and fits and assembles parts to make and repair dies, cutting tools, jigs, fixtures, gages machinists hand tools.	Shortage occupation. Demand has been unmet for several years and needs are expected to continue to mount based upon projections of growth in manufacturing sector.
Tool Designer	94	4	Designs broaches, milling machine cutters, drills and other simple or multiple edged cutting tools and related jigs dies and fixtures for production or experimental use in metalworking machines.	Limited new openings promised and some replacements.
Tool Grinder	143	9	Tends abrasive wheel that sharpens and smooths cutting edge of gools.	Modern tools and methods are eliminating need for this type of work, although expansion is projected locally.
Tool Machine Set Up Operator	559	93	Sets up and operates variety of machine tools, such as radial drill press, lathe, milling machine, shaper and grinder usually on a custom basis applying knowledge of metal properties, machining and shop mathematics.	Considerable growth will take place as this occupation requires all around experience and work is not usually on a production basis.
Traffic Rate Clerk	56	3	Determines rates and charges applicable to freight shipments, computes and records shipment invoices, includes passenger travel rates and records.	Employment stabilized at present; replacements will account for openings.
Transportation Agent	38	3	Expedites movement of freight, mail, baggage and passengers planning itinerary and schedules.	No increase expected and replacements will be minimal.
Tree Trimmer	18	2	Trims trees to clear right-of-way for communications lines and electric power lines to minimize storm and short circuit hazards.	Use of hydraulic hoists and other equipment has facilitated individual efficiency. Often seasonal.
Truck Driver	3,357	228	A term applied to workers who drive trucks to transport materials, merchandise or equipment. Workers are classified according to type of truck, such as over-the-road.	Locally heavy demand in this area. Replacement needs also high.

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Upholsterer	79	2	One who uses knowledge of fabrics and upholstery methods to cover such items as furniture, automobile interiors aircraft interiors and similar fabricated articles. May repair broken or worn articles.	Not a rapidly growing occupation but with normal replacements will offer openings. Many furniture upholsterers have own small shops and are not included.
Vending Machine Repairman	23	1	Installs and repairs vending machines, using hand tools and power tools.	Present staff adequate to handle current requirements.
Waitress/Waiter	1,922	174	Takes customers' orders, serves food and beverages, makes out customers checks and sometimes takes payments as well.	Growth in number of eating places plus rapid turnover in this occupation and replacement needs open up many opportunities. Competition for more desirable situation will be keen.
Watch Repairman	11	1	Diagnoses watch movement defects and repairs watch movements to comply with mechanical and timing specifications.	Often done in home or small shop; as a result only those working for wages are reported. Little demand.
Water Treatment Plant Operator	223	17	Controls treatment plant equipment to purify and clarify water for human consumption and industrial use. Includes treatment of waste water for purification.	Growth has been rapid in this occupation with public pressure building toward intensification of public and private treatment of waste water. Population growth will increase need for pure water.
Weigher	32	1	Weighs filled containers or loaded vehicles of materials, computes weight of contents or cargo for the purpose of keeping clerical records.	Labor market stable, some replacement activity anticipated.
Welder	1,432	137	Welds metal parts together according to layouts, blueprints or work orders using either gas welding or brazing and any combination of arc welding processes.	Excellent opportunities for trained or experienced welders. Promotions and replacement needs will up demand.

Appendix

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TABLE I
PERCENTAGE DISTRIBUTION OF NONAGRICULTURAL EMPLOYMENT
IN THE UNITED STATES, OHIO AND ERIE, HURON AND LORAIN COUNTIES*

	United States	Ohio	Three County Area
TOTAL	100.0	100.0	100.0
Manufacturing	30.0	39.6	45.1
Mining	1.0	0.5	0.1
Contract Construction	5.2	4.3	3.3
Transportation & Utilities	6.6	5.9	5.7
Wholesale & Retail Trades	20.7	19.1	15.6
Finance, Insurance & Real Estate	5.0	3.8	3.0
Services	14.9	13.1	14.0
Government	16.6	13.7	13.2

*Employment and Earning Statistics for States and Areas - U. S. Department of Labor

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TABLE II
NONAGRICULTURAL WAGE AND SALARY WORKERS (EXCEPT DOMESTIC)
BY INDUSTRIAL DIVISIONS
WITH ESTIMATED EMPLOYMENT CHANGE IN 12 AND 24 MONTHS
THREE COUNTY AREA IN NORTHERN OHIO - 1973 - 1974

	Jan. 1972 Employment [1]	Estimated 12 Month Employment	Estimated 12 Month Change	Estimated 12 Month % Change	Estimated 24 Month Employment	Estimated 24 Month Change	Estimated 24 Month % Change
TOTAL	122,000	125,940	3,940	3.2	130,276	8,276	6.8
Manufacturing	55,100	56,863	1,763	3.2	59,100	4,022	7.3
Nonmanufacturing Total	66,900	69,077	2,177	3.3	71,154	4,254	6.4
Mining	100	100	---	---	100	---	---
Contract Construction	4,000	4,124	124	3.1	4,276	276	6.9
Transportation & Utilities [2]	6,900	7,010	110	1.6	7,068	166	2.4
Wholesale & Retail Trades	19,000	19,874	874	4.6	20,824	1,824	9.6
Finance, Insurance & Real Estate	3,700	3,933	233	6.3	4,048	348	9.4
Services [3]	17,100	17,630	530	3.1	18,160	1,060	6.2
Government	16,100	16,406	306	1.9	16,680	580	3.6

[1] Source: Benchmark calculated from data by Research & Statistics, Bureau of Employment Services
[2] Includes Estimated Railroad Employment
[3] Includes Estimated Nonprofit Employment

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TABLE III
CURRENT EMPLOYMENT IN 217 OCCUPATIONS
BY SEX AND OCCUPATIONAL GROUP
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

OCCUPATIONAL GROUPS	Current Employment			Percent By Occupational Group			Sex Percent		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TOTAL	111,848	72,500	39,348	100.0	100.0	100.0	100.0	64.8	35.2
Professional, Technical & Managerial	20,742	11,888	8,854	18.5	16.4	22.5	100.0	57.3	42.7
Clerical	18,263	4,408	13,855	16.4	6.1	35.2	100.0	24.1	75.9
Sales	6,648	3,829	2,819	5.9	5.3	7.2	100.0	57.6	42.4
Service	13,984	5,300	8,684	12.5	7.3	22.1	100.0	37.9	62.1
Processing	6,983	6,571	412	6.3	9.1	1.0	100.0	94.1	5.9
Machine Trades	14,405	12,823	1,582	12.9	17.7	4.0	100.0	89.0	11.0
Bench Work	4,030	2,333	1,697	3.6	3.2	4.3	100.0	57.9	42.1
Structural Work	15,458	15,221	237	13.8	20.9	0.6	100.0	98.5	1.5
Miscellaneous	11,335	10,127	1,208	10.1	14.0	3.1	100.0	89.3	10.7

TABLE IV
CURRENT EMPLOYMENT IN 217 OCCUPATIONS
BY SEX AND INDUSTRIAL DIVISIONS
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

INDUSTRY	Current Employment			Percent By Industry			Distribution By Sex		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TOTAL	111,848	72,500	39,348	100.0	100.0	100.0	100.0	64.8	35.2
Manufacturing	50,838	42,493	8,345	45.5	58.6	21.2	100.0	83.6	16.4
Nonmanufacturing Total	61,010	30,007	31,003	54.5	41.4	78.8	100.0	49.2	50.8
Contract Construction	3,832	3,570	262	3.4	4.9	0.7	100.0	93.2	6.8
Transportation & Utilities	4,882	4,026	856	4.4	5.6	2.2	100.0	82.5	17.5
Wholesale & Retail Trades	17,445	8,677	8,768	15.6	12.0	22.3	100.0	49.7	50.3
Finance, Insurance & Real Estate	3,427	847	2,580	3.1	1.2	6.5	100.0	24.7	75.3
Services	15,635	5,244	10,391	13.9	7.2	26.4	100.0	33.5	66.5
Government	15,789	7,643	8,146	14.1	10.5	20.7	100.0	48.4	51.6

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

217 Occupations	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	122,000							
Surveyed Occupations	111,848	39,348	4,848	3,696	8,544	9,923	7,651	17,574
Accountant	206	16	9	-1	8	20	6	26
Accounting Clerk	343	269	18	14	32	40	18	58
Announcer	32	---	1	---	1	2	---	2
Appliance Repairman	74	---	6	1	7	11	4	15
Assembler	6,990	1,330	281	150	431	562	413	975
Auto Body Repairman	244	---	9	6	15	19	11	30
Auto Mechanic	1,087	---	45	75	120	87	125	212
Auto Service Station Attendant	1,167	---	59	82	141	119	148	267
Baker	80	17	4	---	4	6	---	6
Bartender/Barmaid	830	307	35	35	70	69	69	138
Blacksmith	32	---	1	---	1	2	---	2
Boilermaker	46	---	2	---	2	3	---	3
Bookbinder	339	208	10	---	10	21	---	21
Bookkeeper	1,760	1,398	98	51	149	200	100	300
Bookkeeping Machine Operator	199	189	7	-7	---	14	-7	7
Bricklayer, Mason	176	---	4	14	18	9	16	25
Broadcast Technician	19	---	---	---	---	1	---	1
Busboy/Busgirl	121	69	6	1	7	11	6	17
Bus Driver	747	412	39	33	72	74	16	90
Buyer	115	25	6	---	6	10	1	11
Cabinet Maker	10	---	1	---	1	1	---	1
Cable Splicer	22	---	1	---	1	1	---	1
Candy Maker	20	---	1	---	1	3	---	3
Carpenter	711	---	19	66	85	41	132	173
Caseworker	193	124	10	8	18	18	30	48
Cashier	2,302	2,205	143	172	315	287	401	688
Cement Finisher	34	---	2	---	2	3	---	3
Central Office Repairman	78	---	3	2	5	6	5	11
Chemical Operator	692	---	31	13	44	63	53	116
Chemist	158	1	5	1	6	8	2	10

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Child Care Attendant	118	85	7	5	12	15	11	26
Claims Adjuster	12	6	1	---	1	2	---	2
Claims Clerk	32	11	1	---	1	3	---	3
Clerk, General Office	4,724	3,993	224	161	385	457	308	765
Clerk Typist	1,154	1,145	67	44	111	134	47	181
Collector	64	2	8	---	8	14	---	14
Commercial Designer	76	26	7	14	21	13	17	30
Compositor/Typesetter	260	8	9	1	10	18	7	25
Computer Operator	90	18	4	5	9	9	10	19
Concession Attendant	29	15	4	---	4	7	---	7
Cook	1,364	1,073	65	22	87	127	74	201
Coremaker	114	---	7	7	14	13	9	22
Crane Operator	761	---	22	8	30	51	9	60
Credit Clerk	101	92	5	6	11	11	7	18
Customer Service Repairman	32	---	2	---	2	4	---	4
Cutter, Machine	149	---	6	10	16	13	29	42
Cutting Machine Operator, Fabric	47	26	5	6	11	9	8	17
Developer	158	12	4	---	4	9	---	9
Dietitian	42	41	4	3	7	6	8	14
Dishwasher	142	42	9	---	9	19	---	19
Dispatcher, Radio	51	25	3	7	10	6	8	14
Dispatcher, Vehicle	180	3	7	---	7	14	---	14
Displayman	13	6	1	---	1	1	---	1
Doorman/Usher	133	7	8	---	8	18	---	18
Draftsman	491	13	22	29	51	44	66	110
Drill Press Operator	80	---	3	6	9	7	15	22
Dry Cleaner	200	170	9	4	13	18	9	27
Duplicating Machine Operator	31	18	3	---	3	6	---	6
Electrician	1,271	---	37	36	73	77	81	158
Electronics Assembler	190	81	6	3	9	13	14	27
Electronics Mechanic	121	---	9	12	21	16	23	39
Electronics Technician	66	3	2	---	2	4	3	7
Employment Security Specialist	94	50	4	---	4	7	---	7

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TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Engineer	1,272	9	31	10	41	65	31	96
Engineering Aide	13	---	2	---	2	3	---	3
Engineering Equipment Mechanic	133	---	8	---	8	16	---	16
Engineering Technician	110	3	5	9	14	10	14	24
Engraver	10	7	---	---	---	1	---	1
Estimator	45	---	3	1	4	6	1	7
Extruder Operator	95	43	10	14	24	22	19	41
File Clerk	14	14	2	1	3	4	2	6
Filling Machine Operator	308	4	10	2	12	20	4	24
Firefighter	559	---	12	8	20	25	11	36
Fish & Game Warden	30	---	2	---	2	5	---	5
Fitter	88	---	4	14	18	9	31	40
Floral Designer	63	42	2	18	20	5	21	26
Foreman	1,614	120	45	25	70	93	56	149
Furnace Operator	206	---	7	17	24	20	18	38
Furniture Finisher	27	1	1	1	2	2	2	4
Groundskeeper	194	---	10	---	10	21	6	27
Heat Treater	83	3	6	7	13	13	8	21
Heating & Air Conditioning Mechanic	22	---	1	---	1	2	---	2
Highway Maintenance Man	244	---	8	5	13	18	12	30
Home Economist	10	10	---	---	---	1	---	1
Housekeeper	199	190	21	9	30	46	18	64
House Parent	15	15	1	---	1	2	---	2
Industrial Truck Operator	773	---	29	17	46	59	35	94
Inhalation Therapist	21	12	3	3	6	4	3	7
Inspector/Tester	1,211	207	36	41	77	64	80	144
Instrument Maker	44	2	3	4	7	5	7	12
Investigator	27	4	1	---	1	2	---	2
Janitor/Maid	3,525	1,890	233	137	370	488	297	785
Job Setter	131	---	4	9	13	8	48	56
Key Punch Operator	189	188	11	9	20	24	14	38
Kitchen Helper	1,559	1,330	116	28	144	236	88	324
Laboratory Helper	69	---	2	---	2	5	---	5

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Laboratory Tester	367	35	8	6	14	17	7	24
Laborer	5,991	408	298	159	457	603	405	1,008
Laundry Worker	671	536	35	---	35	72	---	72
Lawyer	78	1	3	---	3	6	---	6
Layout Man	345	---	8	---	8	18	---	18
Lens Grinder	29	13	2	---	2	3	---	3
Librarian	111	104	5	4	9	8	7	15
Library Assistant	161	160	5	3	8	11	5	16
Library Page	42	39	5	4	9	9	5	14
Lineman	378	---	10	13	23	23	22	45
Loan Counselor	127	14	6	-4	2	10	-3	7
Machine Operator General	4,957	1,276	100	146	246	204	245	449
Machinist	1,162	6	37	81	118	81	218	299
Mail Carrier	437	23	8	11	19	19	13	32
Mail Clerk	270	46	7	4	11	15	5	20
Maintenance Man, Building	530	---	20	8	28	35	17	52
Maintenance Mechanic	1,199	---	22	33	55	46	50	96
Manager/Official	5,094	483	165	88	253	330	184	514
Material Handler	1,138	1	30	34	64	63	42	105
Meat Cutter	616	34	24	35	59	63	70	133
Medical Laboratory Assistant	113	103	6	1	7	14	2	16
Medical Technologist	58	41	4	---	4	7	1	8
Messenger	13	---	1	---	1	3	---	3
Metallurgist	27	3	---	---	---	1	---	1
Metal Finisher	621	6	17	14	31	33	53	86
Meter Reader	59	---	4	---	4	7	3	10
Meter Repairman	20	3	---	---	---	2	---	2
Millman, Grain	63	---	3	---	3	6	---	6
Millman, Rubber	29	---	2	2	4	3	2	5
Mill Operator, Rolls	313	1	17	---	17	36	7	43
Millwright	509	---	12	11	23	27	24	51
Mixer/Grinder	59	---	2	---	2	5	---	5
Model Maker	98	---	1	---	1	3	---	3

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TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Mold Press Operator, Plastic	66	65	4	---	4	6	---	6
Molder	355	---	22	11	33	37	29	66
Nurse Aide	930	930	26	29	55	135	47	182
Nurse, Licensed Practical	1,032	1,030	110	46	156	229	82	311
Nurse, Registered	1,056	1,053	135	62	197	277	109	386
Occupational Therapist	9	4	1	4	5	2	5	7
Office Machine Operator	88	69	2	---	2	5	---	5
Oiler	27	---	1	---	1	2	---	2
Operating Engineer	838	4	25	3	28	51	18	69
Orderly	59	---	9	3	12	16	6	22
Packer/Wrapper	574	464	16	4	20	31	15	46
Painter	130	3	8	23	31	16	54	70
Paper Machine Operator	148	27	4	---	4	8	---	8
Pasteurizer	11	---	1	---	1	2	---	2
Patrolman/Guard	818	35	31	10	41	65	26	91
Patternmaker	76	---	6	4	10	14	9	23
Personnel Clerk	81	37	3	---	3	7	---	7
Personnel Interviewer	359	100	6	3	9	13	3	16
Pharmacist	159	18	5	3	8	11	10	21
Pharmacy Helper	26	25	4	---	4	8	---	8
Photographer	32	6	2	1	3	5	9	14
Physical Therapist	38	25	3	---	3	5	---	5
Physician	101	9	4	-6	-2	9	-6	3
Plasterer	73	---	4	-2	2	7	-8	-1
Plater	134	29	2	3	5	4	7	11
Plumber/Pipefitter	658	---	14	77	91	32	249	281
Power Plant Operator	157	1	9	3	12	15	6	21
Power Press Operator	949	60	34	47	81	72	93	165
Presser, Garment	224	224	12	15	27	25	31	56
Pressman, Brick	83	---	2	25	27	5	27	32
Pressman, Printing	442	---	19	13	32	38	31	69
Pressman, Rubber	230	1	5	---	5	9	4	13
Production Clerk	218	41	7	3	10	14	4	18

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Programer	78	10	7	7	14	14	15	29
Projectionist	48	---	2	---	2	4	---	4
Proof Machine Operator	79	70	6	1	7	12	2	14
Proof Reader	12	---	---	---	---	1	---	1
Radiologic Technologist	98	77	6	2	8	13	3	16
Receptionist	37	37	5	---	5	9	---	9
Recreation Leader	178	99	22	9	31	41	25	66
Reporter/Writer	95	26	3	---	3	7	---	7
Roofer	200	---	8	---	8	16	---	16
Routeman	739	4	20	10	30	42	34	76
Salesman	1,779	64	88	76	164	170	177	347
Salesman, Insurance	215	4	10	35	45	20	43	63
Salesman, Securities	10	---	---	---	---	---	---	---
Salesperson	3,915	2,747	131	148	279	261	296	557
Sandblaster	61	---	6	9	15	11	17	28
Sanitarian	12	---	2	---	2	3	---	3
Seamstress/Tailor	81	69	5	2	7	11	5	16
Secretary	1,658	1,632	94	77	171	189	137	326
Sewing Machine Operator	228	228	6	22	28	11	41	52
Sheetmetal Worker	761	---	16	22	38	32	54	86
Shipping/Receiving Clerk	497	108	23	41	64	50	86	136
Sign Painter	45	---	2	---	2	5	---	5
Small Engine Repairman	21	---	1	---	1	2	---	2
Spray Painter	361	10	10	2	12	22	11	33
Stationary Engineer	167	---	8	2	10	16	7	23
Statistical Clerk	81	59	5	1	6	10	5	15
Statistician	11	5	1	---	1	1	---	1
Stenographer	452	451	22	9	31	49	20	69
Stock Clerk	1,240	164	94	76	170	192	138	330
Structural Steel Worker	185	---	8	11	19	17	24	41
Surveyor	16	---	---	---	---	2	---	2
System Analyst	128	8	6	7	13	10	13	23
Tabulating Machine Operator	20	20	1	---	1	3	---	3

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Teacher	7,591	4,719	291	119	410	582	243	825
Teacher Aide	414	383	15	21	36	31	43	74
Telephone Operator	467	464	39	12	51	83	23	106
Teller	931	833	34	69	103	67	122	189
Timekeeper	87	40	3	---	3	7	---	7
Title Examiner	35	24	3	4	7	6	7	13
Tool Designer	94	---	3	1	4	5	1	6
Tool Grinder	143	1	5	4	9	13	10	23
Tool & Die Maker	821	1	37	40	77	74	59	133
Tool Machine Set Up Operator	559	6	30	63	93	62	97	159
Traffic Rate Clerk	56	26	3	---	3	4	---	4
Transportation Agent	38	32	3	---	3	5	---	5
Tree Trimmer	18	---	1	---	1	2	---	2
Truck Driver	3,357	6	109	119	228	212	184	396
TV Repairman	21	---	2	---	2	4	---	4
Upholsterer	79	12	2	---	2	4	7	11
Vending Machine Repairman	23	---	1	---	1	2	---	2
Waitress/Waiter	1,922	1,662	135	39	174	261	62	323
Watch Repairman	11	---	1	---	1	2	---	2
Water Treatment Plant Operator	223	4	8	9	17	17	20	37
Weigher	32	---	1	---	1	3	---	3
Welder	1,432	12	41	96	137	93	238	331

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TABLE VI
EMPLOYMENT AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY OCCUPATIONAL GROUP
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

217 Occupations	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	111,848	39,348	4,848	3,696	8,544	9,923	7,651	17,574
Professional, Tech. &Managerial	20,742	8,854	953	376	1,429	1,915	971	2,886
Clerical	18,263	13,855	970	763	1,733	1,985	1,464	3,449
Sales	6,648	2,819	249	269	518	493	550	1,043
Service	13,984	8,684	804	384	1,188	1,722	826	2,548
Processing	6,983	412	321	150	471	647	343	990
Machine Trades	14,405	1,582	448	604	1,052	921	1,179	2,100
Bench Work	4,030	1,697	176	173	349	351	453	804
Structural Work	15,458	237	496	561	1,057	1,025	1,364	2,389
Miscellaneous	11,335	1,208	431	316	747	864	501	1,365

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TABLE VII
EMPLOYMENT AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

217 Occupations	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	111,848	39,348	4,848	3,696	8,544	9,923	7,651	17,574
Manufacturing	50,838	8,345	1,753	1,642	3,395	3,593	3,686	7,279
Nonmanufacturing Total	61,010	31,003	3,095	2,054	5,149	6,330	3,965	10,295
Contract Construction	3,832	262	162	120	282	330	266	596
Transportation & Utilities	4,882	856	193	110	303	390	168	558
Wholesale & Retail Trades	17,445	8,768	904	823	1,727	1,808	1,676	3,484
Finance, Insurance & Real Estate	3,427	2,580	161	216	377	327	321	648
Services	15,635	10,391	1,058	481	1,539	2,209	970	3,179
Government	15,789	8,146	617	304	921	1,266	564	1,830

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

MANUFACTURING

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	55,100							
Surveyed Occupations - 133	50,838	8,345	1,753	1,642	3,395	3,593	3,686	7,279
Accountant	86	2	3	-6	-3	7	-4	3
Accounting Clerk	155	104	3	1	4	7	4	11
Assembler	6,902	1,320	276	153	429	555	411	966
Auto Mechanic	103	---	3	---	3	4	---	4
Auto Service Station Attendant	297	---	6	---	6	12	---	12
Blacksmith	32	---	1	---	1	2	---	2
Boilermaker	46	---	2	---	2	3	---	3
Bookbinder	339	208	10	---	10	21	---	21
Bookkeeper	140	125	9	13	22	19	17	36
Buyer	56	8	3	---	3	5	1	6
Candy Maker	20	---	1	---	1	3	---	3
Carpenter	131	---	3	35	38	7	70	77
Chemical Operator	692	---	31	13	44	63	53	116
Chemist	155	1	5	1	6	8	2	10
Claims Clerk	14	1	---	---	---	1	---	1
Clerk, General Office	1,797	1,439	77	91	168	162	165	327
Clerk Typist	482	475	22	11	33	46	16	62
Commercial Designer	64	24	7	14	21	13	17	30
Compositor/Typesetter	260	8	9	1	10	18	7	25
Computer Operator	40	2	2	2	4	3	3	6
Coremaker	114	---	7	7	14	13	9	22
Cook	11	1	1	---	1	1	1	2
Crane Operator	694	---	18	8	26	41	9	50
Customer Service Repairman	32	---	2	---	2	4	---	4
Cutter, Machine	149	---	6	10	16	13	29	42
Cutting Machine Operator	37	22	4	6	10	8	9	17
Dispatcher	77	---	3	---	3	6	---	6
Draftsman	435	9	18	29	47	36	66	102
Drill Press Operator	80	---	3	6	9	7	15	22
Duplicating Machine Operator	28	15	3	---	3	6	---	6

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TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

MANUFACTURING - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Electrician	788	---	21	36	57	45	81	126
Electronics Assembler	190	81	6	3	9	13	14	27
Electronics Mechanic	86	---	7	12	19	13	23	36
Electronics Technician	47	3	1	---	1	2	3	5
Engineer	1,154	7	25	10	35	53	31	84
Engineering Equipment Mechanic	90	---	3	---	3	7	---	7
Engineering Technician	110	3	5	9	14	10	14	24
Engraver	10	7	---	---	---	1	---	1
Estimator	25	---	1	1	2	2	1	3
Extruder Operator	95	43	10	14	24	22	19	41
Filling Machine Operator	308	4	10	2	12	20	4	24
Firefighter	23	---	1	---	1	2	---	2
Fitter	88	---	4	14	18	9	31	40
Foreman	1,057	14	24	17	41	49	38	87
Furnace Operator	206	---	7	17	24	20	18	38
Furniture Finisher	10	1	---	1	1	---	2	2
Heat Treater	83	3	6	7	13	13	8	21
Heating & Air Conditioning Mechanic	12	---	---	---	---	1	---	1
Industrial Truck Operator	671	---	23	17	40	46	33	79
Inspector/Tester	1,158	207	33	42	75	58	79	137
Insurance Rate Clerk	9	9	1	---	1	1	---	1
Instrument Maker	44	2	3	4	7	5	7	12
Investigator	5	---	---	---	---	---	---	---
Janitor/Maid	206	21	11	5	16	24	12	36
Job Setter	131	---	4	9	13	8	48	56
Key Punch Operator	84	83	4	2	6	8	2	10
Kitchen Helper	6	6	---	---	---	1	---	1
Laboratory Helper	69	---	2	---	2	5	---	5
Laboratory Tester	367	35	8	6	14	17	7	24
Laborer	4,419	363	212	102	314	429	303	732
Lawyer	22	---	1	---	1	2	---	2
Layout Man	345	---	8	---	8	18	---	18
Machine Operator General	4,957	1,276	100	146	246	204	245	449

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

MANUFACTURING - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Machinist	1,132	6	36	81	117	79	218	297
Maintenance Man, Building	44	---	2	2	4	3	4	7
Maintenance Mechanic	1,105	---	16	33	49	36	50	86
Manager/Official	2,259	98	54	20	74	108	47	155
Material Handler	820	1	14	7	21	32	13	45
Meat Cutter	396	---	12	3	15	35	12	47
Metal Finisher	621	6	17	14	31	33	53	86
Metallurgist	27	3	---	---	---	1	---	1
Millman/Rubber	29	---	2	2	4	3	2	5
Mill Operator, Rolls	313	1	17	---	17	36	7	43
Millwright	494	---	12	11	23	26	24	50
Mixer/Grinder	59	---	2	---	2	5	---	5
Model Maker	98	---	1	---	1	3	---	3
Mold Press Operator, Plastic	66	65	4	---	4	6	---	6
Molder	355	---	22	11	33	37	29	66
Nurse, Registered	25	25	2	1	3	4	1	5
Office Machine Operator	77	58	2	---	2	3	---	3
Oiler	27	---	1	---	1	2	---	2
Operating Engineer	435	---	13	---	13	25	---	25
Packer/Wrapper	470	383	13	4	17	24	15	39
Painter	92	3	6	23	29	12	54	66
Paper Machine Operator	148	27	4	---	4	8	---	8
Pasteurizer	11	---	1	---	1	2	---	2
Patrolman	175	5	7	1	8	15	4	19
Patternmaker	76	---	6	4	10	14	9	23
Personnel Clerk	73	34	3	---	3	7	---	7
Personnel Interviewer	51	---	2	---	2	4	---	4
Photographer	32	6	2	1	3	5	9	14
Pilot	6	---	---	---	---	---	---	---
Plater	134	29	2	3	5	4	7	11
Plumber/Pipefitter	306	---	4	52	56	10	191	201
Power Plant Operator	20	---	1	---	1	1	---	1
Power Press Operator	944	58	34	47	81	71	93	164

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

MANUFACTURING - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Pressman, Brick	83	---	2	25	27	5	27	32
Pressman, Printing	442	---	19	13	32	38	31	69
Pressman, Rubber	230	1	5	---	5	9	4	13
Production Clerk	218	41	7	3	10	14	4	18
Programer	28	2	2	1	3	5	2	7
Proof Reader	12	---	---	---	---	1	---	1
Receptionist	37	37	5	---	5	9	---	9
Reporter/Writer	82	20	2	---	2	6	---	6
Routeman	420	4	9	-3	6	19	-3	16
Salesman	945	17	29	40	69	63	94	157
Sandblaster	61	---	6	9	15	11	17	28
Secretary	818	809	30	27	57	58	48	106
Sewing Machine Operator	228	228	6	22	28	11	41	52
Sheetmetal Worker	590	---	11	22	33	21	54	75
Shipping/Receiving Clerk	375	84	18	34	52	38	66	104
Sign Painter	45	---	2	---	2	5	---	5
Spray Painter	288	10	6	2	8	12	11	23
Stationary Engineer	98	---	3	---	3	8	2	10
Statistical Clerk	77	56	5	1	6	10	5	15
Statistician	11	5	1	---	1	1	---	1
Stenographer	154	154	8	3	11	17	7	24
Stock Clerk	280	9	21	12	33	43	33	76
Structural Steel Worker	148	---	5	11	16	9	24	33
Systems Analyst	110	8	3	1	4	6	1	7
Tailor/Seamstress	14	10	2	1	3	3	3	6
Telephone Operator	43	43	3	---	3	6	---	6
Timekeeper	60	18	2	---	2	5	---	5
Tool Designer	94	---	3	1	4	5	1	6
Tool Grinder	143	1	5	4	9	13	10	23
Tool Machine Set Up Operator	559	6	30	63	93	62	97	159
Tool & Die Maker	805	1	36	40	76	73	59	132
Traffic Rate Clerk	47	17	2	---	2	3	---	3
Truck Driver	490	---	27	26	53	48	41	89

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

MANUFACTURING - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Upholsterer	79	12	2	---	2	4	7	11
Vending Machine Operator	17	---	1	---	1	2	---	2
Weigher	32	---	1	---	1	3	---	3
Welder	1,412	12	41	93	134	91	235	326

CONTRACT CONSTRUCTION

Estimated Employment	4,000							
Surveyed Occupations - 30	3,832	262	162	120	282	330	266	596
Bookkeeper	93	84	4	---	4	7	---	7
Bricklayer	176	---	4	14	18	9	16	25
Buyer	5	---	---	---	---	---	---	---
Carpenter	525	---	15	31	46	31	62	93
Cement Finisher	34	---	2	---	2	3	---	3
Clerk, General Office	174	128	21	4	25	43	27	70
Clerk Typist	19	19	2	---	2	4	---	4
Crane Operator	31	---	3	---	3	7	---	7
Draftsman	10	---	1	---	1	2	---	2
Electrician	385	---	12	---	12	23	---	23
Engineer	33	---	2	---	2	4	---	4
Engineering Equipment Operator	43	---	5	---	5	9	---	9
Estimator	20	---	2	---	2	4	---	4
Foreman	151	---	4	8	12	9	16	25
Janitor	7	---	1	---	1	2	---	2
Key Punch Operator	4	4	---	---	---	---	---	---
Laborer	706	---	31	44	75	62	79	141
Manager/Official	104	14	4	---	4	8	---	8
Operating Engineer	300	---	8	3	11	17	18	35
Painter	16	---	2	---	2	3	---	3
Plasterer	73	---	4	-2	2	7	-8	-1
Plumber/Pipefitter	294	---	8	8	16	16	39	55
Programer	2	---	---	---	---	---	---	---
Roofer	200	---	8	---	8	16	---	16
Secretary	13	13	1	---	1	2	---	2

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TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

CONTRACT CONSTRUCTION - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Sheetmetal Worker	171	---	5	---	5	11	---	11
Stock Clerk	16	---	1	---	1	3	---	3
Structural Steel Worker	37	---	3	---	3	8	---	8
Truck Driver	184	---	9	10	19	19	17	36
Welder	6	---	---	---	---	1	---	1

TRANSPORTATION & UTILITIES

Estimated Employment	6,900							
Surveyed Occupations - 58	4,882	856	193	110	303	390	168	558
Accountant	4	---	---	---	---	---	---	---
Accounting Clerk	41	37	3	---	3	7	---	7
Announcer	32	---	1	---	1	2	---	2
Appliance Serviceman	17	---	1	---	1	2	---	2
Assembler	66	---	2	2	4	3	5	8
Auto Body Repairman	3	---	---	---	---	---	---	---
Auto Mechanic	151	---	6	1	7	14	3	17
Auto Service Station Attendant	15	---	1	---	1	2	---	2
Bookkeeper	86	52	4	---	4	7	---	7
Broadcast Technician	19	---	---	---	---	1	---	1
Buyer	4	---	---	---	---	---	---	---
Cable Splicer	22	---	1	---	1	1	---	1
Cashier	6	5	---	---	---	1	---	1
Central Office Repairman	78	---	3	2	5	6	5	11
Claims Adjuster	9	6	1	---	1	2	---	2
Claims Examiner	3	---	---	---	---	---	---	---
Clerk, General Office	260	201	13	1	14	24	3	27
Clerk Typist	76	76	3	---	3	6	---	6
Collector	14	---	2	---	2	4	---	4
Crane Operator	3	---	---	---	---	---	---	---
Dispatcher	103	3	4	---	4	8	---	8
Draftsman	28	3	2	---	2	4	---	4
Electrician	55	---	2	---	2	4	---	4
Electro-Mechanical Technician	35	---	2	---	2	3	---	3
Electronics Technician	19	---	1	---	1	2	---	2

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

TRANSPORTATION & UTILITIES - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Engineer	36	---	1	---	1	3	---	3
Foreman	61	8	4	---	4	6	1	7
Groundskeeper	9	---	1	---	1	1	---	1
Home Economist	10	10	---	---	---	1	---	1
Industrial Truck Operator	8	---	---	---	---	1	---	1
Inspector/Tester	8	---	---	---	---	---	---	---
Janitor/Maid	30	5	3	---	3	5	---	5
Key Punch Operator	7	7	---	---	---	1	---	1
Kitchen Helper	3	3	---	---	---	---	---	---
Laborer	128	---	20	---	20	40	---	40
Lineman/Serviceman	359	---	10	13	23	22	22	44
Machinist	4	---	---	---	---	---	---	---
Maintenance Mechanic	31	---	2	---	2	3	---	3
Manager/Official	268	23	5	2	7	10	2	12
Material Handler	52	---	4	6	10	7	5	12
Meter Reader	29	---	3	---	3	5	---	5
Meter Repairman	9	---	---	---	---	1	---	1
Millwright	11	---	---	---	---	1	---	1
Personnel Interviewer	4	---	---	---	---	---	---	---
Power Plant Operator	88	1	5	3	8	9	6	15
Reporter/Writer	13	6	1	---	1	1	---	1
Salesman	116	---	5	-1	4	10	-1	9
Salesperson	17	17	2	---	2	3	---	3
Secretary	22	22	1	---	1	2	---	2
Stenographer	49	48	3	---	3	5	---	5
Stock Clerk	28	1	2	---	2	3	---	3
Surveyor	6	---	---	---	---	1	---	1
Telephone Operator	295	292	22	6	28	49	14	63
Teller	8	8	1	---	1	1	---	1
Timekeeper	5	2	---	---	---	---	---	---
Transportation Agent	26	20	2	---	2	4	---	4
Truck Driver	1,987	---	44	75	119	90	103	193
Welder	6	---	---	---	---	---	---	---

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TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

WHOLESALE & RETAIL TRADES

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	19,000							
Surveyed Occupations - 64	17,445	8,768	904	823	1,727	1,808	1,676	3,484
Accountant	16	3	1	---	1	2	---	2
Accounting Clerk	5	5	1	---	1	2	---	2
Appliance Serviceman	26	---	2	---	2	3	---	3
Auto Body Repairman	153	---	6	6	12	13	11	24
Auto Mechanic	778	---	33	74	107	65	122	187
Auto Service Station Attendant	674	---	40	53	93	81	90	171
Baker	80	17	4	---	4	6	---	6
Bartender	411	153	20	6	26	40	11	51
Bookkeeper	562	477	33	11	44	65	38	103
Bus Boy	121	69	6	1	7	11	6	17
Buyer	47	16	3	---	3	5	---	5
Cabinet Maker	10	---	1	---	1	1	---	1
Carpenter	13	---	---	---	---	1	---	1
Cashier	1,796	1,708	114	171	285	227	399	626
Clerk, General Office	500	424	19	11	30	39	27	66
Clerk Typist	31	31	3	---	3	5	---	5
Collector	5	2	1	---	1	1	---	1
Commercial Designer	5	---	---	---	---	---	---	---
Cook	649	412	26	15	41	55	53	108
Crane Operator	33	---	1	---	1	3	---	3
Credit/Collection Clerk	20	20	1	---	1	2	---	2
Dishwasher	142	42	9	---	9	19	---	19
Displayman	13	6	1	---	1	1	---	1
Electrician	21	---	1	---	1	2	---	2
Floral Designer	63	42	2	18	20	5	21	26
Foreman	87	11	4	---	4	9	---	9
Furniture Finisher	5	---	---	---	---	---	---	---
Heating & Air Conditioning Mechanic	10	---	1	---	1	1	---	1
Industrial Truck Operator	94	---	6	---	6	12	2	14
Janitor/Maid	232	149	24	5	29	50	11	61
Kitchen Helper	543	414	45	16	61	92	42	134

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

WHOLESALE & RETAIL TRADES - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Laborer	126	42	5	10	15	10	16	26
Machinist	21	---	1	---	1	2	---	2
Maintenance Man, Building	36	---	2	---	2	4	---	4
Manager/Official	1,278	189	51	41	92	102	93	195
Material Handler	247	---	11	21	32	22	24	46
Meat Cutter	220	34	12	32	44	28	58	86
Millman, Grain	63	---	3	---	3	6	---	6
Millwright	4	---	---	---	---	---	---	---
Operating Engineer	6	---	---	---	---	---	---	---
Packer/Wrapper	104	81	3	---	3	7	---	7
Patrolman/Guard	65	3	3	---	3	6	---	6
Pharmacist	132	5	3	2	5	7	9	16
Pharmacy Helper	16	16	3	---	3	6	---	6
Plumber/Pipefitter	44	---	2	17	19	4	18	22
Punch Press Operator	5	2	---	---	---	1	---	1
Routeman	179	---	5	13	18	11	37	48
Salesman	718	47	54	37	91	97	84	181
Salesperson, Retail	3,830	2,723	125	148	273	251	296	547
Secretary	109	103	10	1	11	19	6	25
Shipping/Receiving Clerk	122	24	5	7	12	12	20	32
Small Engine Repairman	21	---	1	---	1	2	---	2
Stenographer	22	22	1	---	1	2	---	2
Stock Clerk	890	148	69	64	133	142	103	245
Tailor/Seamstress	57	49	3	1	4	7	2	9
Telephone Operator	8	8	1	---	1	2	---	2
Timekeeper	22	20	1	---	1	2	---	2
Tool & Die Maker	16	---	1	---	1	1	---	1
Truck Driver	558	6	20	7	27	39	21	60
TV Repairman	21	---	2	---	2	4	---	4
Vending Machine Repairman	6	---	---	---	---	---	---	---
Waitress/Waiter	1,335	1,245	98	32	130	191	53	244
Watch Repairman	11	---	1	---	1	2	---	2
Welder	8	---	---	3	3	1	3	4

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TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

FINANCE, INSURANCE & REAL ESTATE

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	3,700							
Surveyed Occupations - 31	3,427	2,580	161	216	377	327	321	648
Accountant	33	5	2	3	5	3	3	6
Accounting Clerk	81	72	6	13	19	14	14	28
Bookkeeper	200	181	12	-7	5	24	---	24
Bookkeeping Machine Operator	199	189	7	-7	---	14	-7	7
Clerk, General Office	406	377	13	30	43	26	37	63
Clerk Typist	122	122	9	7	16	16	9	25
Collector	15	---	2	---	2	4	---	4
Computer Operator	23	12	1	1	2	3	2	5
Credit Collection Clerk	81	72	4	6	10	9	7	16
File Clerk	14	14	2	1	3	4	2	6
Janitor/Maid	128	86	6	-10	-4	12	-10	2
Key Punch Operator	36	36	3	---	3	5	---	5
Loan Counselor	127	14	6	-4	2	10	-3	7
Manager/Official	194	21	6	22	28	12	36	48
Messenger	13	---	1	---	1	3	---	3
Patrolman/Guard	9	---	1	---	1	2	---	2
Personnel Clerk	3	3	---	---	---	---	---	---
Personnel Interviewer	7	---	---	---	---	1	---	1
Programer	10	1	1	---	1	2	---	2
Proof Machine Operator	79	70	6	1	7	12	2	14
Salesman, Insurance	215	4	10	35	45	20	43	63
Secretary	340	331	20	45	65	43	48	91
Security Analyst	10	---	---	---	---	---	---	---
Statistical Clerk	4	3	---	---	---	---	---	---
Stenographer	58	58	2	1	3	6	2	8
Stock Clerk	4	2	---	---	---	---	---	---
Tabulating Machine Operator	17	17	1	---	1	3	---	3
Telephone Operator	29	29	3	6	9	6	7	13
Teller	923	825	33	69	102	66	122	188
Title Examiner	35	24	3	4	7	6	7	3
Transportation Agent	12	12	1	---	1	1	---	1

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

SERVICES

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	17,100							
Surveyed Occupations - 81	15,635	10,391	1,058	481	1,539	2,209	970	3,179
Accountant	47	3	2	---	2	5	4	9
Accounting Clerk	38	38	4	---	4	7	---	7
Appliance Repairman	31	---	3	1	4	6	4	10
Assembler	22	10	3	-5	-2	4	-3	1
Auto Body Repairman	88	---	3	---	3	6	---	6
Auto Mechanic	6	---	---	---	---	---	---	---
Auto Service Station Attendant	181	---	12	29	41	24	58	82
Bartender/Barmaid	419	154	15	29	44	29	58	87
Bookkeeper	606	410	32	32	64	69	40	109
Bus Driver	10	2	1	---	1	1	1	2
Buyer	3	1	---	---	---	---	---	---
Carpenter	29	---	1	---	1	2	---	2
Caseworker	93	63	6	8	14	9	29	38
Cashier/Checker	495	487	29	1	30	59	2	61
Child Care Attendant	22	16	2	5	7	4	11	15
Clerk, General Office	1,034	948	59	16	75	121	32	153
Clerk Typist	170	170	13	3	16	26	10	36
Commercial Artist	7	2	---	---	---	---	---	---
Computer Operator	23	---	1	2	3	2	5	7
Concession Attendant	29	15	4	---	4	7	---	7
Cook	290	259	21	3	24	38	4	42
Cutter, Fabrics	10	4	1	---	1	1	-1	---
Developer	158	12	4	---	4	9	---	9
Dietitian	38	38	4	3	7	6	8	14
Doorman/Usher	133	7	8	---	8	18	---	18
Draftsman	18	1	1	---	1	2	---	2
Dry Cleaner	200	170	9	4	13	18	9	27
Electrician	9	---	---	---	---	1	---	1
Engineer	21	---	2	---	2	3	---	3
Foreman	151	87	6	---	6	13	1	14

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TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

SERVICES - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Furniture Finisher	12	---	1	---	1	2	---	2
Groundskeeper	107	---	4	---	4	9	---	9
Housekeeper	199	190	21	9	30	46	18	64
House Parent	15	15	1	---	1	2	---	2
Inhalation Therapist	21	12	3	3	6	4	3	7
Janitor/Maid	1,906	1,203	133	121	254	271	234	505
Key Punch Operator	53	53	4	6	10	9	11	20
Kitchen Helper	423	327	43	4	47	88	16	104
Laborer	328	---	22	---	22	44	---	44
Laundry Worker	666	531	35	---	35	72	---	72
Lawyer	34	1	1	---	1	2	---	2
Lens Grinder	29	13	2	---	2	3	---	3
Librarian	21	19	1	---	1	3	---	3
Library Aide	4	4	---	---	---	---	---	---
Maintenance Man, Building	309	---	12	4	16	20	10	30
Maintenance Mechanic	40	---	3	---	3	6	---	6
Manager/Official	523	91	28	3	31	53	6	59
Material Handler	6	---	---	---	---	---	---	---
Medical Laboratory Assistant	113	103	6	1	7	14	2	16
Medical Technologist	52	38	4	---	4	7	---	7
Nurse Aide	930	930	26	29	55	135	47	182
Nurse, Licensed Practical	981	979	107	45	152	222	81	303
Nurse, Registered	949	946	131	62	193	269	106	375
Occupational Therapist	9	4	1	4	5	2	5	7
Orderly	59	---	9	3	12	16	6	22
Painter	22	---	---	---	---	1	---	1
Patrolman	25	---	3	---	3	6	---	6
Personnel Interviewer	297	100	4	3	7	8	3	11
Pharmacist	22	13	2	1	3	4	1	5
Pharmacy Helper	10	9	1	---	1	2	---	2
Physical Therapist	28	23	3	---	3	5	---	5
Physician	93	9	4	-6	-2	9	-6	3
Plumber/Pipefitter	7	---	---	---	---	1	---	1

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

SERVICES - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Presser, Garment	224	224	12	15	27	25	31	56
Programer	31	4	3	6	9	5	13	18
Projectionist	48	---	2	---	2	4	---	4
Radiologic Technologist	98	77	6	2	8	13	3	16
Recreation Leader	119	85	17	9	26	34	25	59
Routeman	140	---	6	---	6	12	---	12
Seamstress	7	7	---	---	---	1	---	1
Secretary	229	227	28	3	31	56	34	90
Spray Painter	73	---	4	---	4	10	---	10
Stationary Engineer	50	---	4	1	5	6	2	8
Stenographer	122	122	7	2	9	16	8	24
Stock Clerk	10	4	1	---	1	1	2	3
Systems Analyst	18	---	3	6	9	4	12	16
Teacher	1,090	624	51	---	51	99	6	105
Teacher Aide	12	9	3	6	9	4	7	11
Telephone Operator	81	81	10	---	10	19	1	20
Truck Driver	22	---	3	1	4	5	2	7
Waitress/Waiter	587	417	37	7	44	70	9	79

GOVERNMENT

Estimated Employment	16,100							
Surveyed Occupations - 78	15,789	8,146	617	304	921	1,266	564	1,830
Accountant	20	3	1	2	3	3	3	6
Accounting Clerk	23	13	1	---	1	3	---	3
Auto Mechanic	49	---	3	---	3	4	---	4
Bookkeeper	73	69	4	2	6	9	5	14
Bus Driver	737	410	38	33	71	73	15	88
Carpenter	13	---	---	---	---	---	---	---
Caseworker	100	61	4	---	4	9	1	10
Cashier	5	5	---	---	---	---	---	---
Chemist	3	---	---	---	---	---	---	---
Child Care Attendant	96	69	5	---	5	11	---	11
Clerk, General Office	553	476	22	8	30	42	17	59
Clerk Typist	254	252	15	23	38	31	12	43

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

GOVERNMENT - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Claims Examiner	18	10	1	---	1	2	---	2
Collector	30	---	3	---	3	5	---	5
Computer Operator	4	4	---	---	---	1	---	1
Cook	414	401	17	4	21	33	16	49
Dietitian	4	3	---	---	---	---	---	---
Dispatcher	51	25	3	7	10	6	8	14
Duplicating Machine Operator	3	3	---	---	---	---	---	---
Electrician	13	---	1	---	1	2	---	2
Employment Interviewer	94	50	4	---	4	7	---	7
Engineer	28	2	1	---	1	2	---	2
Engineering Aide	13	---	2	---	2	3	---	3
Firefighter	536	---	11	8	19	23	11	34
Fish & Game Warden	30	---	2	---	2	5	---	5
Foreman	107	---	3	---	3	7	---	7
Groundskeeper	78	---	5	---	5	11	6	17
Highway Maintenance Man	244	---	8	5	13	18	12	30
Inspector	45	---	3	-1	2	6	1	7
Investigator	22	4	1	---	1	2	---	2
Janitor/Maid	1,016	426	55	16	71	124	50	174
Key Punch Operator	5	5	---	1	1	1	1	2
Kitchen Helper	584	580	28	8	36	55	30	85
Laborer	284	3	8	3	11	16	7	23
Laundry Worker	5	5	---	---	---	---	---	---
Lawyer	22	---	1	---	1	2	---	2
Librarian	90	85	4	4	8	5	7	12
Library Assistant	157	156	5	3	8	11	5	16
Library Page	42	39	5	4	9	9	5	14
Lineman	19	---	---	---	---	1	---	1
Machinist	5	---	---	---	---	---	---	---
Mail Carrier	437	23	8	11	19	19	13	32
Mail Clerk	270	46	7	4	11	15	5	20
Maintenance Man, Building	141	---	4	2	6	8	3	11
Maintenance Mechanic	23	---	1	---	1	1	---	1

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISION:
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

GOVERNMENT - Continued

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Manager/Official	462	47	17	---	17	37	---	37
Material Handler	13	---	1	---	1	2	---	2
Medical Laboratory Technician	6	3	---	---	---	---	1	1
Meter Reader	30	---	1	---	1	2	3	5
Meter repairman	11	3	---	---	---	1	---	1
Nurse, Licensed Practical	26	26	1	---	1	3	---	3
Nurse, Registered	107	107	4	---	4	8	3	11
Office Machine Operator	11	11	---	---	---	2	---	2
Operating Engineer	97	4	4	---	4	9	---	9
Patrolman/Guard	544	27	17	9	26	36	22	58
Personnel Clerk	5	---	---	---	---	---	---	---
Pharmacist	5	---	---	---	---	---	---	---
Physical Therapist	10	2	---	---	---	---	---	---
Physician	8	---	---	---	---	---	---	---
Plumber	7	---	---	---	---	1	1	2
Power Plant Operator	49	---	3	---	3	5	---	5
Programer	7	3	1	---	1	2	---	2
Recreation Leader	59	14	5	---	5	7	---	7
Salesperson	68	7	4	---	4	7	---	7
Sanitarian	12	---	2	---	2	3	---	3
Seamstress	3	3	---	---	---	---	---	---
Secretary	127	127	4	1	5	9	1	10
Stationary Engineer	19	---	1	1	2	2	3	5
Stenographer	47	47	1	3	4	3	3	6
Stock Clerk	12	---	---	---	---	---	---	---
Surveyor	10	---	---	---	---	1	---	1
Tabulating Machine Operator	3	3	---	---	---	---	---	---
Teacher	6,501	4,095	240	119	359	483	237	720
Teacher Aide	402	374	12	15	27	27	36	63
Telephone Operator	11	11	---	---	---	1	1	2
Tree Trimmer	18	---	1	---	1	2	---	2
Truck Driver	116	---	6	---	6	11	---	11
Water Treatment Plant Operator	223	4	8	9	17	17	20	37

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

PROFESSIONAL, MANAGERIAL & TECHNICAL

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	20,742	8,854	953	476	1,429	1,915	971	2,886
Manufacturing	5,251	259	148	89	237	300	199	499
Contract Construction	174	14	9	---	9	18	---	18
Transportation & Utilities	481	42	13	2	15	28	2	30
Wholesale & Retail Trades	1,557	271	63	61	124	127	123	250
Finance, Insurance & Real Estate	416	65	18	25	43	34	43	77
Services	4,769	3,275	395	156	551	790	310	1,100
Government	8,094	4,928	307	143	450	618	294	912

CLERICAL

TOTAL	18,263	13,855	970	763	1,733	1,985	1,464	3,449
Manufacturing	5,126	3,613	230	200	430	475	370	845
Contract Construction	319	248	29	4	33	59	27	86
Transportation & Utilities	957	765	59	7	66	118	18	136
Wholesale & Retail Trades	4,150	3,009	262	265	527	525	593	1,118
Finance, Insurance & Real Estate	2,647	2,413	125	166	291	258	245	503
Services	2,931	2,556	190	65	255	389	145	534
Government	2,133	1,251	75	56	131	161	66	227

SALES

TOTAL	6,648	2,819	249	269	518	493	550	1,043
Manufacturing	1,365	21	38	37	75	82	91	173
Contract Construction	---	---	---	---	---	---	---	---
Transportation & Utilities	133	17	7	-1	6	13	-1	12
Wholesale & Retail Trades	4,727	2,770	184	198	382	359	417	776
Finance, Insurance & Real Estate	215	4	10	35	45	20	43	63
Services	140	---	6	---	6	12	---	12
Government	68	7	4	---	4	7	---	7

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

SERVICES

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	13,984	8,384	804	384	1,188	1,722	826	2,548
Manufacturing	421	33	20	6	26	43	17	60
Contract Construction	7	---	1	---	1	2	---	2
Transportation & Utilities	42	8	4	---	4	6	---	6
Wholesale & Retail Trades	3,718	2,521	243	107	350	492	234	726
Finance, Insurance & Real Estate	137	86	7	-10	-3	14	-10	4
Services	6,298	4,512	386	229	615	861	442	1,303
Government	3,361	1,524	143	52	195	304	143	447

PROCESSING

TOTAL	6,983	412	321	150	471	647	343	990
Manufacturing	6,735	353	312	140	452	631	327	958
Contract Construction	---	---	---	---	---	---	---	---
Transportation & Utilities	---	---	---	---	---	---	---	---
Wholesale & Retail Trades	248	59	9	10	19	16	16	32
Finance, Insurance & Real Estate	---	---	---	---	---	---	---	---
Services	---	---	---	---	---	---	---	---
Government	---	---	---	---	---	---	---	---

MACHINE TRADES

TOTAL	14,405	1,582	448	604	1,052	921	1,179	2,100
Manufacturing	13,112	1,580	386	529	915	801	1,054	1,855
Contract Construction	43	---	5	---	5	9	---	9
Transportation & Utilities	197	---	8	1	9	18	3	21
Wholesale & Retail Trades	882	2	38	74	112	74	122	196
Finance, Insurance & Real Estate	---	---	---	---	---	---	---	---
Services	90	---	7	---	7	14	---	14
Government	81	---	4	---	4	5	---	5

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TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP AND BY INDUSTRY FOR 12 AND 24 MONTHS THREE COUNTY AREA IN NORTHERN OHIO - JANUARY 1972

BENCH WORK

	Current Employment		12 Month Needs			24 Month Needs		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	4,030	1,697	176	173	349	351	453	804
Manufacturing	3,753	1,608	160	177	337	318	455	773
Contract Construction	---	---	---	---	---	---	---	---
Transportation & Utilities	34	---	1	---	1	3	---	3
Wholesale & Retail Trades	120	49	8	1	9	16	2	18
Finance, Insurance & Real Estate	---	---	---	---	---	---	---	---
Services	109	34	7	-5	2	13	-4	9
Government	14	6	---	---	---	1	---	1

STRUCTURAL WORK

TOTAL	15,458	237	496	561	1,057	1,025	1,364	2,389
Manufacturing	10,245	230	312	397	709	645	1,045	1,690
Contract Construction	3,074	---	106	106	212	216	222	438
Transportation & Utilities	639	---	22	17	39	43	32	75
Wholesale & Retail Trades	307	---	12	26	38	27	32	59
Finance, Insurance & Real Estate	---	---	---	---	---	---	---	---
Services	513	---	23	5	28	46	14	60
Government	680	7	21	10	31	48	19	67

MISCELLANEOUS

TOTAL	11,335	1,208	431	316	747	864	501	1,365
Manufacturing	4,830	648	147	67	214	298	128	426
Contract Construction	215	---	12	10	22	26	17	43
Transportation & Utilities	2,399	24	79	84	163	161	114	275
Wholesale & Retail Trades	1,736	87	85	81	166	172	137	309
Finance, Insurance & Real Estate	12	12	1	---	1	1	---	1
Services	785	14	44	31	75	84	63	147
Government	1,358	423	63	43	106	122	42	164

VT 017 445
HOLLMAN, KENNETH W.;SMITH, LEWIS M.
MISSISSIPPI'S LABOR FORCE IN 1970:
CHARACTERISTICS AND RECENT CHANGES.

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IDENTIFIERS - *LABOR FORCE PARTICIPATION;
MISSISSIPPI

ABSTRACT - IN AN EFFORT TO PREDICT AND PLAN
EFFECTIVELY FOR THE STATE'S FUTURE ECONOMY,
AN INVESTIGATION OF MISSISSIPPI'S LABOR FORCE
IN THE 1960'S WAS CORRELATED WITH THE 1970
EXISTING TRENDS AND ANALYZED IN RELATION TO
COMPOSITION, CHARACTERISTICS, AND
OCCUPATIONAL STRUCTURE. FINDINGS OBTAINED
INDICATED A CHANGE IN THE GENERAL STRUCTURE
OF THE LABOR FORCE. FLUCTUATIONS OCCURRED
WITH REGARD TO SIZE, PARTICIPATION, SEX, AND
RACIAL COMPOSITIONS, AS WELL AS OCCUPATIONAL
PATTERNS. THE EXISTENCE OF AN UNDER
UTILIZATION OF MANPOWER WAS EVIDENCED.
RECOMMENDATIONS AND SUPPLEMENTARY TABLES ARE
INCLUDED IN THE REPORT. (SN)

VT 017 445

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MISSISSIPPI'S LABOR FORCE IN 1970:

Characteristics and Recent Changes

Center for Manpower Studies

Memphis State University & University of Mississippi

U.S. Department of Labor Grant 31-45-70-03

Bureau of Business and Economic Research

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MISSISSIPPI'S LABOR FORCE IN 1970: CHARACTERISTICS AND RECENT CHANGES

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INTRODUCTION*

Changes in population characteristics, in income levels, and in the economic structure of any state are both the cause and effect of changes in the state's labor force. In the decade from 1960 to 1970 many significant changes occurred in the characteristics and composition of Mississippi's labor force. Some of these changes are merely the continuation of trends that have been in progress for several decades. Others were unique to the 1960's and may represent the beginning of new trends.

The purpose of this study is to present a broad picture of Mississippi's labor force as it existed in 1970 and to discuss and analyze the major changes which occurred in that labor force in the decade of the 1960's. Emphasis is placed on its composition, characteristics, and occupational structure. The purpose of such a profile is two-fold. First, it is important to know the current status of Mississippi's labor force in order to analyze the situation which now exists with regard to the State's economy. Problems exist, many of which, if pinpointed, can be solved in a relatively short time. Also, the type and volume of State services required, such as welfare, child care services, vocational training, and many others, are influenced by the characteristics of the existing labor force. Secondly, knowledge of the composition and characteristics of the labor force helps to reveal the most likely possiblities for future industrial growth in terms of the type and number of jobs as well as aspects of the labor force which will require significant attention by State and local governments. That is to say,

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the study is undertaken because of a concern for present and future growth potential in the State. Mississippi is one of the poorest states in the country, and it is important that human capital in the State be developed and utilized to the maximum extent possible. Optimum utilization of the State's labor resources requires a knowledge of where unused potential lies, and how it can be brought into the productive sector of the State's economy.

The analysis such as that developed in this paper is a prerequisite to policy formulation and implementation by state and local governments. Those involved in the development and planning of Mississippi's future as well as interested citizens should find the report both informative and useful.**

LABOR FORCE COMPOSITION AND CHARACTERISTICS

Many of the significant changes in the composition and characteristics of Mississippi's labor force are in general similar to changes occurring throughout the United States. There are, however, some notable exceptions, particularly with respect to the labor force participation of various groups. This section outlines the composition and characteristics of Mississippi's labor force and discusses some of the more important changes which occurred over the last decade.

Labor force is defined here as including all members of the State's population 16 years of age or older who are not institutionalized, who are currently employed or are currently unemployed. To be classified as unemployed, an indi-

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**Figures in this study not specifically footnoted have been derived from U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), and U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960 General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office, 1961).

vidual must be currently available for work and have been actively seeking employment within the last four weeks.[1] When military personnel are removed from the above defined group, the remainder are classified as the civilian labor force.

In 1970, there were 779,495 people in Mississippi's labor force, an increase of 6.4 percent over 1960. During the same period the State's population increased by 38,771, or 1.8 percent.[2] Not only were more people in the labor force in 1970 but, as the figures indicate, the percentage of the total population in the labor force had increased. As can be seen from the figures in Table 1, this increase was not evenly distributed among the male and female members of the population. The male labor force actually declined by slightly over 2 percent while the female labor force increased by over 23 percent. Mississippi, like the United States as a whole, is experiencing both a relatively large increase in its female labor force and an increase in the portion of the total labor force that is female. In terms of percentage increase, this growth in the female labor force was approximately evenly distributed among the urban, rural nonfarm, and rural farm labor forces.

Another characteristic of the labor force which is extremely important is age distribution. Two important changes have occurred in the overall age distribution of Mississippi's labor force since 1960. First, there has been a lowering

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[1]This definition is used by the United States Bureau of Labor Statistics and the Bureau of the Census. It became the official definition in 1967. Prior to that time the labor force had included all those 14 and 15 year olds who were employed or unemployed. Whenever possible, adjustments have been made to reunite the 1960 figures with the 1970 definition. In some cases data limitations made this impossible. However, comparisons are still significant since 14 and 15 year olds accounted for less than one percent of Mississippi's labor force in 1970.

[2]U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, Number of Inhabitants, Mississippi, PC(1)-A26 (Washington: U. S. Government Printing Office, 1971), p. 7.

of the average age of labor force members, caused primarily by large increases in the 20-24 and 25-34 year old age groups and a decrease in the 35-44 year old age group. Secondly, there has been some compression of the labor force caused by declines in the number of workers under 20 and over 64. Changes for various age groups, absolute and percentage, are shown in Table II.

Table I

CHANGE IN MISSISSIPPI'S TOTAL LABOR FORCE
BY SEX, 1960 TO 1970

Sex	Year		Change in Total, 1960-1970	
	1960	1970	Absolute	Percentage
Male	490,655	480,498	-10,157	- 2.07
Female	242,212	298,997	+56,785	+23.44
Total	732,867	779,495	+46,628	+ 6.36

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), p. 146.

The most significant increase in the labor force occurred in the 20-24 year old age category. A probable causal factor was the post World War II baby boom. Substantial increase is also found in the 25-34 year old group. Although a more detailed age breakdown of the labor force is not currently available, it is probable that most of the increase in the 25-34 age bracket was concentrated in the lower portion of this category and was also the result of the upturn in the birth rate during the mid 1940's.

As Table II indicates the most significant decline in the total labor force occurred in the 16-17 year old age category. There was an increase in the 18-19

TABLE II

LABOR FORCE BY AGE AND SEX IN MISSISSIPPI, 1960 AND 1970,
AND ABSOLUTE AND PERCENTAGE CHANGES, 1960-1970

Age Category	1960			1970*			Change in Total, 1960-1970	
	Male	Female	Total	Male	Female	Total	Absolute	Percentage
16-17	13,867	5,930	19,797	10,770	5,090	15,860	- 3,937	-19.9
18-19	22,018	10,595	32,613	22,183	13,719	35,902	+ 3,289	+10.1
20-24	53,826	27,576	81,402	64,056	43,249	107,305	+25,903	+31.8
25-34	103,011	51,757	154,768	106,863	63,170	170,033	+15,265	+ 9.9
35-44	104,399	57,153	161,552	96,897	62,762	159,659	- 1,893	- 1.2
45-64	165,482	80,131	245,613	157,159	98,887	256,046	+10,433	+ 4.2
65 and over	28,052	9,070	37,122	22,570	12,120	34,690	- 2,432	- 6.6
Total	490,655	242,212	732,867	480,498	298,997	779,495	+46,628	+ 6.4

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), p. 146. Percentage computations are by the authors.

*The definition of the labor force varied between 1960 and 1970. Beginning in 1967, the Bureau of the Census defined the labor force as including all members of the State's population 16 years of age or older who are not institutionalized, who are currently employed or are currently unemployed. Before 1967, the labor force had included, also, all those 14 and 15 year olds who were employed or unemployed. For a fuller explanation see footnote 1.

year old group, with most of the increase being accounted for by females. The result of these two changes was a net decrease in the total labor force under 20 years of age. The decline in the number of younger labor force members in part reflects the trend toward more education, which usually means later entry into the labor force. It may also result in part from the increased difficulty which young workers with little education and little or no job skills are having in securing employment. In addition, this may reflect a normalization of birth rates as well as increased knowledge and use of birth control techniques.

There was a decrease of 6.6 percent in the labor force over 65 years of age. The continuing pressure for earlier retirement is without doubt a factor here. The increase in the number of females in the labor force who were over 65 was not expected and from data available at the present time cannot be adequately explained. It is hoped that data will become available in the future which will give some insight into this change in the labor force.

In 1970 there were 226,945 nonwhite members of the State's labor force and 552,550 white members. (See Table III.) This is a substantial change in the racial composition of Mississippi's labor force. In 1960 nonwhites accounted for 36.4 percent of the labor force but by 1970 this had fallen to 29.1 percent. This change consists of a decline of 39,528 (14.8 percent) in the nonwhite labor force, and an increase of 86,156 (18.5 percent) in the white labor force. Part of this change is the result of a 10.8 percent increase in the white population between 1960 and 1970, together with a 10.5 percent decline in the nonwhite population during the same period.[3] It also reflects substantial changes in labor

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[3]Kenneth W. Hollman and Brian S. Rungeling, Mississippi's Population (1960-1970): General Characteristics (University of Mississippi: Center for Manpower Studies and Bureau of Business and Economic Research, 1971), p. 36.

TABLE III

LABOR FORCE BY SEX AND RACE IN MISSISSIPPI, 1960 and 1970,
AND ABSOLUTE AND PERCENTAGE CHANGES, 1960-1970

Sex	1960		1970		Change, 1960-1970			
					Absolute		Percentage	
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
Male	323,023	167,632	352,315	128,183	+29,292	-39,449	+ 9.1	-23.6
Female	143,371	98,841	200,235	98,762	+56,864	- 79	+39.7	*
Total	466,394	266,473	552,550	226,945	+86,156	-39,528	+18.5	-14.8

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), p. 146, and U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office, 1961), p. 113. Percentage computations are by the authors.

*Less than 1/10 of 1 %.

force participation rates by sex and race. Reasons for these changes will be discussed in the next section.

As Table III indicates there was an increase in both sexes of the white labor force. Population growth was an important factor in both those increases although increased labor force participation is a more important causal factor in the case of females. The decrease in the nonwhite labor force is more difficult to explain. The number of nonwhite females in the labor force remained almost constant over the decade while the number of nonwhite males decreased by almost 24 percent. The decline in the nonwhite female labor force which should have been expected due to population decrease was offset by increased labor force participation of this group. The decrease in the nonwhite male labor force was substantially more than should have been expected as a result of the decrease in the nonwhite population. Outmigration of nonwhite males of prime labor force age (25-44) may account for part of this decline as well as the general downward shift in the age composition of the nonwhite labor force. However, much of the decline must be attributed to a significant decrease in the labor force participation rate of nonwhite males.

Since 1960 there has been a considerable urbanization of Mississippi's labor force. Both the rural nonfarm and urban labor forces increased during the decade, while the rural farm labor force fell by 50 percent. The rural farm labor force, which was 22.1 percent of the total labor force in 1960, had fallen to 10.5 percent of the total by 1970. This shift of the labor force away from the farm labor market was approximately evenly distributed among urban and rural nonfarm labor forces, with the former increasing from 43.6 percent of the total to 49.6 percent and the latter from 34.3 percent to 39.9 percent. The trend toward urbanization of the labor force was true for male, female, white and nonwhite and is what should

be expected in a State where the farm sector of the economy has declined in relative importance. Table IV shows the distribution of the labor force among the urban, rural nonfarm, and rural farm sectors in 1960 and 1970.

The urbanization of the population in Mississippi has some significant implications for the future of the State's economy. Labor force participation rates are usually higher in urban areas than in rural areas. This means that the economy must be able to furnish more and more jobs as the urbanization of the population continues. It also means that an increasing percentage of the State's population is contributing to the total output and economic growth in the State.

There is another important characteristic of the State's labor force which merits discussion. The labor force is becoming increasingly educated and skilled, an important factor if further industrialization is to occur. From 1960 to 1970 the median school years completed by the over 25 population increased from 8.9 to 10.7. At the same time the number of high school graduates increased from 184,331 to 266,121 and the number of college graduates from 59,273 to 89,563. In addition the number with 1 to 3 years of college increased by 16,411.[4] This represents a substantial increase in human capital investment in Mississippi. However, there remains great disparity in educational attainment among various subgroups of the population and the State lags behind the nation as a whole in this respect.

Summary on Labor Force Composition and Characteristics

In 1970 the State of Mississippi possessed a labor force that was better

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[4]Figures relating to educational attainment were derived from Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26, p. 146.

TABLE IV

COMPOSITION OF THE TOTAL LABOR FORCE BY RESIDENCE, RACE, AND SEX IN MISSISSIPPI, 1960 and 1970

Residence and Race	1970 (16 and over)			1960 (14 and over)		
	Total	Male	Female	Total	Male	Female
Urban	386,793	228,280	158,513	323,832	199,374	124,458
White	277,991	172,942	105,049	215,975	142,457	73,518
Nonwhite	108,802	55,338	53,464	107,857	56,917	50,940
Rural Farm	81,780	55,306	26,474	163,836	124,318	39,518
White	56,786	38,370	18,416	87,534	66,373	21,161
Nonwhite	24,994	16,936	8,058	76,302	57,945	18,357
Rural Nonfarm	310,922	196,912	114,010	254,936	173,953	80,983
White	217,773	141,003	76,770	167,132	117,447	49,685
Nonwhite	93,149	55,909	37,240	87,804	56,506	31,298
Total Labor Force	779,495	480,498	298,997	742,604	497,645	244,959

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), pp. 158-159, and U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office, 1961), p. 122. Percentage computations are by the authors.

educated and more urbanized than ever before. While these trends, particularly in educational attainment, will probably continue over the next decade, rapid economic growth which is desired by the State will require even greater efforts in the area of education and skill training. The increasing supply of trained and educated young workers will put considerable pressure on older workers and may accelerate the trend toward earlier retirement, and further compress the age range of the State's labor force.

The trend toward more females in the labor force should continue placing pressure on the State to provide more day care type facilities for mothers of young children who desire or need to work. There will also be an increasing demand for part-time employment by women who are prevented by home responsibilities from seeking full-time employment. This increase in female workers could have important implications for consumption patterns, particularly in the area of home service and labor saving household appliances.

It is difficult to anticipate the trend in racial composition of the labor force. Mississippi will probably continue to lose a substantial portion of its prime age, better prepared nonwhite labor force. Reversal of this trend may depend more upon changes in social attitudes than on economic factors and these changes are likely to be slow in coming.

CIVILIAN LABOR FORCE PARTICIPATION*

The changes observed in the composition of the Mississippi civilian labor force between 1960 and 1970, particularly with respect to race and sex, can be

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* The discussion that follows is in terms of the civilian labor force (see page 3). However, because the number of military personnel in Mississippi is relatively small, less than 23,000, most of the conclusions reached will apply to the total labor force.

partially explained by changes in the composition of the total population. However, this is by no means a sufficient explanation of the total changes that have occurred. Much of the change resulted from shifts in the labor force participation rates of different labor groups.

Labor force participation rates tend to vary significantly by factors such as sex, race, and age. In addition, recent studies have shown that such factors as marital status, education, and attitudes toward work have effects on labor force participation.[5] Table V shows the labor force participation rate for the civilian noninstitutionalized population 16 years old and over by race, sex and place of residence for 1960 and 1970. While the overall participation rate has experienced a relatively small increase, from 51.4 percent in 1960 to 53.1 percent in 1970, the table shows that there has been considerable change in the participation rates of the various subgroups.

Labor Force Participation - Males

The labor force participation rate for males declined slightly between 1960 and 1970, from 71.9 percent to 69.4 percent. Although there was a decline for both whites and nonwhites, the majority of the decline is accounted for by a rather dramatic decline in nonwhite male labor force participation. Much of this change must be attributed to changes in the age distribution of the population. For both white and nonwhite there has been a downward shift such that the 18 to 24 year olds made up a substantially larger percent of the total population in 1970 than in 1960. For nonwhites there was a numerical decline in every age category from 25 to 60 years of age. It is generally recognized that labor force

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[5] H. S. Parnes, "Labor Force Participation and Labor Mobility," A Review of Industrial Relations Research, Volume I (Madison, Wisconsin: Industrial Relations Research Association, 1970), pp. 1-78.

TABLE V

CIVILIAN NONINSTITUTIONALIZED LABOR FORCE PARTICIPATION RATES
BY RACE, SEX, AND PLACE OF RESIDENCE,
IN MISSISSIPPI, 1960-1970

Race and Sex	1960				1970			
	Total	Urban	Rural Nonfarm	Rural Farm	Total	Urban	Rural Nonfarm	Rural Farm
White and Nonwhite								
Male	71.9	76.2	68.4	71.0	69.4	73.3	67.0	64.2
Female	33.0	41.8	29.9	22.8	39.0	44.5	35.5	30.0
Total	51.4	57.2	48.3	47.0	53.1	57.3	50.4	46.6
White								
Male	74.2	79.0	70.1	72.7	73.8	77.4	71.5	68.6
Female	31.9	38.0	29.3	24.1	39.4	43.2	36.8	32.8
Total	52.2	56.6	49.2	48.9	55.6	58.7	53.5	50.7
Nonwhite								
Male	68.2	70.6	65.1	69.2	59.9	63.4	58.0	56.0
Female	34.6	49.0	31.0	21.5	38.3	47.3	33.0	25.1
Total	50.2	58.4	46.7	45.1	48.0	54.2	44.5	40.1

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), pp. 158-159, and U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office, 1961), pp. 122-123. Percentage computations are by the authors.

participation rates are lower for younger workers than for the 25 to 60 year olds. However, recent studies have shown that the national trend is toward greater labor force participation of the younger age groups, 16-24.[6] This is not true for young nonwhites in the Nation or in Mississippi. In 1960, labor force participation rates in Mississippi for nonwhite 16-17, 18-19, and 20-24 year olds were 32.6, 56.2, and 80.3 percent, respectively. In 1970 these rates had fallen to 15.2, 39.7, and 69.7 percent.[7] Some of this change may be explained by increased educational opportunities for nonwhites which have resulted in increased school enrollment in all age groups from 16 to 21. This is not a sufficient explanation, however. Much of this decreasing labor force participation must be attributed to the inability of young nonwhites to find employment.[8] What is true for the nation as a whole is in all probability intensified for nonwhite youth in Mississippi.

The change in age distribution is only a partial explanation of declining labor force participation rates by males, for there has been a decline in labor force participation rates for all age groups, with the greatest declines again being found in nonwhite males. Outmigration is a partial explanation. Blacks, particularly males, continued to leave the State at a high rate between 1960 and 1970. Migration rates are usually highest among the best educated and among professional and technical workers.[9] These are also the groups with the highest

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[6]William G. Bowen and T. Aldrich Finegan, The Economics of Labor Force Participation (Princeton, New Jersey: Princeton University Press, 1969), pp. 380-416.

[7]Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26, p. 146.

[8]For a more complete discussion, see Bowen and Finegan, The Economics of Labor Force Participation, pp. 380-416.

[9]Parnes, "Labor Force Participation and Labor Mobility," p. 48.

labor force participation rates. In other words, those most likely to be in the labor force, and to be employed, are most likely to move out of the State. This means that when net outmigration occurs, as it has for blacks in Mississippi between 1960 and 1970, there is a high probability that the remaining population will contain a disproportionate number of those who are, for reasons of health, lack of education, or some other factor, less likely to be in the labor force. For Mississippi's nonwhite male population this factor, which is most likely to be true with respect to education and work skills, has had a noticeable effect on labor force participation.

It is an accepted fact that marital status is a primary factor determining labor force participation of women. Recent research has indicated that marital status is also an important factor in determining labor force participation rates for men of all age groups.[10] Bowen and Finegan, in perhaps the most comprehensive research on labor force participation to date, have stated that marital status is the single most powerful predictor of labor force participation for prime age males.[11] This strong association between labor force participation and marital status has been attributed to several factors:

(1) the greater need of men with family responsibilities for income;

(2) the existence of a selective process such that men with problems which are likely to keep them out of the labor force are also less likely to be married;

(3) welfare rules which encourage men who have difficulty supporting their families to desert--many of whom are likely to leave the labor force.

In 1960, 63.4 percent of Mississippi's over 14 male population was married with wife present. In 1970 this had fallen to 62.5 percent. For nonwhites the

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[10]Parnes, "Labor Force Participation and Labor Mobility," p. 25.

[11]Bowen and Finegan, The Economics of Labor Force Participation, pp. 41-49.

change was much more drastic, with a decline from 55.2 percent in 1960 to 49.9 percent in 1970. This decline is particularly significant for prime age males. Although the extent to which changes in marital status have affected male labor force participation rates cannot be accurately tested with the available data, the above figures indicate there is reason to believe it has been significant.

Labor force participation rates declined for males in every category except one during the ten year period from 1960 to 1970. (See Table V.) By far the most significant declines, for both white and nonwhite, have been in labor force participation of the rural farm populations. While this may in part reflect the effects of some or all of the factors previously discussed, it also reflects changes within the rural farm sector itself. Mississippi has experienced a decline in agricultural employment and job opportunities due to mechanization, something which has characterized the entire rural farm sector of the U. S. economy for many years. The great importance of agriculture to Mississippi's economy, and therefore its employment, has accentuated the effects. Between 1940 and 1960 agricultural employment in the State fell from 57.8 percent of total employment to 20.4 percent.[12] By 1970 this had fallen to 7.5 percent. The decline in employment opportunities in the farm sector forced many members of the labor force to move to urban areas in search of employment opportunities. However, jobs in urban areas often require more formal education or a higher level of skill than those previously found in farm areas. In addition, those jobs which did remain in farm areas in many cases required greater skill than previously, due to mechanization.

These facts create problems for a population which has traditionally been

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[12]Ronald E. Carrier, "Mississippi's Economy in Transition," Mississippi's Business, Volume 20, No. 6 (June, 1962), p. 3.

and continues to be less educated and less skilled than the population in other areas of the State. Between 1960 and 1970, median school years completed for the urban male population 25 years old and over rose from 10.6 to 12.1. At the same time in the rural farm area median school years completed for the over 25 male population rose only from 8.1 to 8.8. In addition in 1970, 22.8 percent of the urban male population between 16 and 64 had received some vocational training while only 15.3 percent of the same group in the rural farm area had any vocational training. This indicates two facts. First, those with the most education and skill are able to leave the rural farm areas and find employment in other areas of the State. This means that those remaining are the least prepared occupationally. In addition, those remaining are probably becoming less rather than more prepared for the jobs available. Thus, the dramatic decline in labor force participation rates reflects not a voluntary movement out of the labor force but the movement of workers who have become discouraged in their efforts to find employment and are no longer actively seeking what they know from experience is not available. Nor has this effect been felt only in rural farm areas. Even though the best prepared are likely to leave, many find themselves unable to compete in urban areas. In fact then, the decline in labor force participation rates for males in urban areas may in part be the result of events which have taken place in the rural farm sector of the economy.

Labor Force Participation - Female

The decline in labor participation rates for males between 1960 and 1970 was consistent across categories and, in some cases, dramatic in its magnitude. With regard to the participation of women in the labor force the reverse is true. As Table V indicates, there was an increase in labor force participation in every category except one, nonwhite urban females, and some of the increases were quite

substantial. Increased labor force participation of women is a trend which has been continuing for many years, not only in Mississippi but in the nation as a whole, and is expected to continue through the decade of the 1970's.[13] Many factors have contributed to the increase in the female labor force.

Marital and family status have as much to do with determining female labor force participation as any other factors. Married women living with their husbands have lower labor force participation rates than women who never married, are separated, widowed, or divorced. Between 1960 and 1970 the percentage of Mississippi's female population over 14 who were married and living with their husbands fell from 58.6 to 56.9. Most of this decrease is probably explained by the trend toward later marriage. The percent of women ever married between the ages of 15 and 24 fell from 41.6 in 1960 to 38.6 in 1970. For those between 25 and 34 it fell from 93.1 to 90.7. These are the age groups which show the largest increases in labor force participation rates in the ten year period and it is reasonable to assume that marital status was an influencing factor.

The single most important factor which influences labor force participation of married women is presence and age composition of children.[14] The strongest deterrent to labor force participation is the presence of children under six years of age. Between 1960 and 1970 the percent of total population under five years of age fell from 12.8 percent to 9.5 percent.[15] The number of children between

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[13]"The U. S. Economy in 1980: A Review of BLS Projections," Monthly Labor Review, Volume 93, No. 4 (April, 1970), p. 30.

[14]Malcolm S. Cohon, "Married Women in the Labor Force: An Analysis of Participation Rates," Monthly Labor Review, Volume 92, No. 10 (October, 1969), p. 33.

[15]Bureau of the Census, 1970 Census of Population, Mississippi, Advance Report, General Population Characteristics, PC(V2)-26, p. 3, and Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C, p. 112. Percentage computations are by the authors.

5 and 14 also declined, by 2.3 percent. For women of ages 15-24 and 25-34, the number of children per 1,000 women ever married fell from 1,574 to 1,176 and 3,036 to 2,792, respectively. These declines can be expected to make it possible for a larger percentage of women to work than previously due to the reduction in responsibilities at home.

The tremendous increase in employment in the service industries in the last few decades is a well established fact in the United States and is no less true in Mississippi. This type of employment has always been more accessible to female workers than most other types. In addition, the type of light industry which has been increasing in Mississippi during the last decade is traditionally a good source of employment for female workers. Because employment opportunities are an important factor in determining labor force participation, particularly for secondary family workers, these changes in the industrial structure of Mississippi's economy have added to an environment which is increasingly conducive to female labor force participation.[16]

The increasing urbanization of the population probably has influenced labor force participation of women by placing them in an area where employment opportunities are not only greater but more varied. However, this does not explain why the participation rates of women in rural farm areas has increased. Indeed, one might have expected rates for women in rural farm areas to decline for the same reasons participation rates for males in rural farm areas have declined. There are of course the reasons previously stated for increased female labor force participation which are applicable to rural farm areas. More significantly, the decline in the male labor force participation rates, particularly for nonwhites, may be responsible. Loss of a male wage earner, for whatever the reasons, may

[16]Parnes, "Labor Force Participation and Labor Mobility," p. 21.

force women into the labor force, even in areas where job opportunities are not abundant. Additionally the average income per family is substantially lower for families in rural areas relative to other areas, and this puts additional pressure on females to find employment as an added source of family income.

No discussion of female labor force participation would be adequate without recognition of the effects which are attributable to changing attitudes, personal and social. One of the important determinants of whether or not married women work is the attitude which their husband has toward their participation in the labor force. Many factors, of course, determine such attitudes but it would surely be correct to state that there is increased acceptance, even encouragement, on the part of husbands with respect to employment for their wives, particularly in the absence of young children. For single women social attitudes are such that there is probably little influence left from this source which would prevent a single female from working. The slow but sure breakdown of barriers to female entry into certain occupations also has some effect by making the range of occupations much broader and therefore, in some cases, the prospect of employment more desirable.

There can be no doubt that the importance of women as a source of labor has increased in Mississippi and will continue to do so for the next decade. This is extremely important for a State which desires to continue to grow economically, since the characteristics of the labor force have a great influence on the type of industry which will locate here. Since Mississippi has the lowest per family income of any state, increased labor force participation by women also represents a way in which this income can be increased in the short run, if the economy is able to provide the necessary employment opportunities.

Nonwhite Labor Force Participation

Almost every study of labor force participation rates has found that there are substantial differences between the rates of whites and nonwhites and that the direction of difference varies between men and women.[17] In general, the rates for nonwhite males are less than for white males while the opposite is true for females. In Mississippi, this was true in 1960, but in 1970, although it was true for males, the labor force participation rates of nonwhite females was less than that of white females. In Mississippi between 1960 and 1970 the difference between the rates of nonwhite males and white males increased even though the indications are that the opposite is true for the U. S. as a whole.[18]

It is difficult to accurately interpret the meaning of color differentiation in labor force participation rates and even more difficult to explain why the trends in Mississippi are different from those in the rest of the nation. Certainly much of the difference can be explained by such factors as lower educational preparation for nonwhites, poorer health standards, and lower potential earnings, all of which would reduce labor force participation. In a State where the average educational attainment of the population over 25 is 12.1 for white males and females and only 6.5 for nonwhite males and 8.1 for nonwhite females, education must account for much of the differential. With regard to the increased differential between white and nonwhite males, outmigration of prime age nonwhite males is with little doubt a contributing factor.

The usual explanations for the higher participation rates of nonwhite females include their concentration in service industries, particularly domestic service,

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[17] Parnes, "Labor Force Participation and Labor Mobility," pp. 21-25.

[18] Ibid., p. 36.

where they are better able to compete, the greater need due to overall family income position, and greater labor force ties due to family instability. Certainly, the tremendous decrease in private household workers which took place in Mississippi between 1960 and 1970, predominantly a nonwhite occupation, has had some effect. It is anticipated that more detailed data will, at a later date, allow a more thorough investigation into the reasons why Mississippi differs from the rest of the U. S. with respect to the above trends.

Finally, there is no doubt that some of the difference in labor force participation attributable to color reflects differences in labor market experiences of whites and nonwhites which takes the form of discrimination faced by nonwhites. This discrimination not only prevents employment, particularly in certain occupations, but eventually discourages labor force participation. This has important social and economic implications not only for the individual involved but for the entire State in its efforts to promote a healthily growing economy.

Summary

Changes in labor force participation rates for most subgroups of Mississippi's labor force have been similar to those occuring throughout the Nation. Prime age males have a slightly lower rate than in 1960. Overall, there has been a significant increase in the labor force participation rates of women. Also, the young, for various reasons, are entering the labor force at a later age causing a decline in the labor force participation rates of this worker group. The data reflect the effect that continuing urbanization of the State's population has had in increasing the overall labor force participation rate.

One of the more important findings from the standpoint of future social and economic effects and needs was the decline between 1960 and 1970 in the labor force participation rate for black males. The causes are at best difficult to

determine. Outmigration, education, discrimination and many others probably had an effect.

An additional factor of importance for the State is that its overall labor force participation rate in 1970 was 53.1 percent, as compared to 61.1 percent for the Nation as a whole. In other words a smaller portion of the work age population in Mississippi, relative to the Nation, contributes to the State's yearly output.

EMPLOYMENT AND OCCUPATION

The 1970 Census showed that 718,948 persons were employed in Mississippi, and an additional 37,539 persons were in the civilian labor force but were unable to find employment. While this represents a significant increase in total jobs over 1960 and to a lesser degree a decrease in the unemployed (4.9 percent unemployed in 1970 compared to 5.4 percent in 1960), it is somewhat meaningless to attempt to draw comparative conclusions from these data because of the significant differences in the economic conditions which existed in 1960 and 1970.

There continues to be a significant differential in unemployment among subgroups of the labor force. Racially, white males possess the lowest unemployment rate, 3.0 percent, while nonwhite females have the highest, 10.7 percent. Overall, women are more than 2 percentage points higher than males, and nonwhites over 4 percentage points higher than whites. Although the data available give limited direct information, there is reason to suspect that younger workers bear the highest unemployment burden.[19]

There were some important changes in the industrial composition of employ-

[19]The unemployment rate for 14 and 15 year olds exceeded 13 percent in 1970.

ment, with agriculture and personal services declining dramatically, and manufacturing and professional and related services increasing substantially. The investigation of occupational changes which follows gives an insight into how well the decreases in some areas matched the increases in others in terms of people available for work.

Occupational Shifts--The Entire Economy

Several important shifts occurred in the occupational structure of the State of Mississippi between 1960 and 1970. A study of these job distribution patterns helps to reveal certain significant changes in the economy of the State. The changing occupational structure of the employed Mississippi labor force is discussed in this section, and possible explanations for the direction and magnitude of the shifts are offered. Data relevant to the subject are shown in Table VI.

Mississippi experienced an increase in the number of workers in eight of twelve occupational categories in the 1960 to 1970 intercensal period. This is partially a result of the population growth in the State during the decade. The four occupational groups which suffered declines during the decade were farm related, service, or laborer categories. These data suggest that there has been a trend in recent years in Mississippi toward the higher skill and better paying occupations and away from the lower skill and poorer paying jobs.

The largest percentage increase in the 1960's (61.4 percent) in any major occupational group occurred in the professional, technical, and kindred workers category. A total of 87,969 persons were employed in this category in 1970, or 12.2 percent of Mississippi's employed civilian labor force.

The professional, technical, and kindred workers group includes such high skill occupations as engineers, physicians, teachers, health workers, certain technicians, and other professional workers. Favorable adjustment in this cate-

TABLE VI

NUMBER IN AND PERCENTAGE DISTRIBUTION OF EMPLOYED CIVILIAN LABOR FORCE BY MAJOR OCCUPATION IN MISSISSIPPI, 1970, AND PERCENTAGE CHANGE FROM 1960

Major Occupation	1970 Employed Civilian Labor Force		
	Number	Percentage of Total	Percentage Change from 1960
Professional, Technical and Kindred Workers	87,969	12.2	+61.4
Managers and Administrators, Except Farm	57,580	8.0	+12.4
Sales Workers	41,962	5.8	+14.0
Clerical and Kindred Workers	90,157	12.5	+58.8
Craftsmen, Foremen, and Kindred Workers	98,191	13.7	+38.9
Operatives, Except Transport	121,611	16.9	+33.2
Transport Equipment Operatives	33,425	4.6	+16.4
Laborers, Except Farm	41,796	5.8	- 1.1
Farmers and Farm Managers	20,697	2.9	-71.4
Farm Laborers and Farm Foremen	25,621	3.6	-60.4
Service Workers, Except Private Household	70,299	9.8	+46.8
Private Household Workers	29,640	4.1	-38.1
Total	718,948	100.0	+ 5.4

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)C26 (Washington: U. S. Government Printing Office, 1972), p. 160, and U. S. Department of Commerce, Bureau of the Census, Census of Population, 1960, General Social and Economic Characteristics Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office, 1961), pp. 125-126. Percentage computations are by the authors. Changes in occupational classifications between 1960 and 1970 required adjustments in the following categories: managers and administrators, except farm; operatives, except transport; transport equipment operatives: and laborers, except farm.

gory reflects the increased application of science to industry in the State.

Growth in the professional, technical, and kindred workers category in Mississippi in the 1960's is attributable to several factors, the most important of which may be rising personal incomes,[20] increasing defense related expenditures,[21] and increasing urbanization. The rising personal income level in recent years has been accompanied by a growth in the demand for health care, education, and other services and products provided by professionals. This resulted in a rise in the number of persons in this category in the State. Much of the employment increase in the upper skill level categories in Mississippi in the 1960's has also been due to the growth of defense related expenditures in the State. These types of industries tend to use large numbers of engineers, architects, technicians, and other high skill personnel. In addition, urbanization in Mississippi has probably created a greater demand for workers in the professional, technical, and kindred workers group, since urban residents tend to use the services of professionals to a greater degree than do their rural counterparts.[22]

Expanded industrialization in Mississippi in the 1960's in all likelihood generated jobs for more professional, technical, and kindred workers in the business community. Businesses obviously need the services of several professionals in this category, such as accountants and lawyers, and to a lesser degree resi-

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[20] The per capita personal income in Mississippi rose from $1,203 in 1960 to $2,575 in 1970. See U. S. Department of Commerce, Bureau of the Census, Survey of Current Business, Volume LI, Number 8 (August, 1971), p. 31.

[21] For example, defense generated employment in Mississippi increased from 13,000 to 38,000 between 1963 and 1968. See Bureau of the Census, Statistical Abstract of the United States, 1965, p. 257, and Bureau of the Census, Statistical Abstract of the United States, 1971, p. 248.

[22] C. Lowell Harriss, Handbook of State and Local Government Finance (New York: Committee for Economic Development, 1967), p. 11.

dent or consulting psychiatrists, physicians, professional nurses, dieticians, and librarians, among a variety of others.

The occupations in the professional, technical, and kindred workers group have been little affected by labor-saving devices, since many professional jobs tend to be labor intensive. Hence the number of persons employed in these occupations increased rapidly in Mississippi from 1960 to 1970, despite the widespread application of technology in many industries in the State.

A substantial gain of 58.8 percent was recorded in the clerical and kindred workers occupational group in Mississippi in the 1960's. Slightly over 90,000 workers held jobs in this category in 1970, or 12.5 percent of the State's employed civilian labor force.

The shift from goods producing industries to services producing industries in Mississippi in the 1960's created a need for many clerical workers, which may help explain why our era has been characterized as the "paper age." More clerical workers may also be a result of the increased complexity of occupations.[23] Computer and advanced office equipment technology has probably had uneven effects in this category in Mississippi. In some clerical occupations, such as those in the finance and insurance industries, technology has not been applied broadly. For example, banktellers, account collectors, and insurance adjustors, examiners, and investigators have not been replaced by automated equipment to a substantial degree; and, when computers are used in these industries, there is often an increased demand for clerks to process the data generated. On the other hand, computerization has been applied to a greater degree in manufacturing industries and occupations (payroll clerks, timekeepers, and stock clerks). However, even

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[23]Vera C. Perrella, "Women and the Labor Force," Monthly Labor Review, Volume 91, No. 2 (February, 1968), p. 8.

in these industries, clerks are needed to prepare programs and inputs when computers are used.[24]

A significant enlargement (46.8 percent) was recorded in the service workers (except private household) category in Mississippi during the decade of the 1960's. A total of 70,299 persons were employed in occupations in this group in 1970, or 9.8 percent of the employed civilian labor force in the State. As the Mississippi economy has become weighted toward the services sector during the 1960's, and incomes have risen, there has been a greater than proportionate growth in the demand for low skill service personnel.

The large increase in this category during the 1960's means that Mississippians are purchasing many goods and services which they formerly did without or provided for themselves. The expanded police forces in Mississippi State and local governments, an enlarged number of eating establishments, more amusement and entertainment facilities, additional motels and hotels, and a larger number of barber shops and beauty salons in the State have expanded many service occupations.[25] Growth of these occupations in the 1960's indicates that Mississippi citizens are placing more economic value on their own time, and have become more inclined to hire others to perform many service tasks.

Slightly over 98,000 Mississippians were classified in the craftsmen, fore-

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[24] U. S. Department of Labor, "Employment Trends: Projections and Implications," in Richard L. Rowan (ed.) Readings in Labor Economics and Labor Relations (Homewood, Illinois: Richard Irwin, Inc., 1972), p. 32.

[25] The amounts of these increases can be calculated from figures contained in Bureau of the Census, Statistical Abstract of the United States, 1962; Bureau of the Census, Statistical Abstract of the United States, 1971; Bureau of the Census, 1963 Census of Business, Retail Trade, Mississippi, Volume II, BC63-RA26; and Mississippi State University, Mississippi Statistical Abstract, 1971 (State College, Mississippi: Division of Research, Mississippi State University, in cooperation with the Mississippi Research and Development Center, 1972), p. 282.

men, and kindred workers occupational category in 1970, or 13.7 percent of the State's employed civilian labor force. This was the second largest occupational group, exceeded only by the operatives (except transport) category. The number of workers in this group expanded by 38.9 percent in the 1960 to 1970 intercensal period.

Growth in the craftsmen, foremen, and kindred workers category is an indication of the increased amount of production employment and emphasis on mechanization in Mississippi in the 1960's,[26] since metal craftsmen, die makers and setters, machinists, and other craftsmen are included in this group. The increase in this category also reveals the growth in the housing and construction industry in the State from 1960 to 1970,[27] since brickmasons, carpenters, electricians, excavators, painters, plumbers, and other construction craftsmen are a part of this group. Gains in the craftsmen, foremen and kindred workers group also reflect the increased use of home appliances and cars by Mississippians during the decade, as the repairers of air conditioners, heaters, television sets and radios, refrigeration equipment, and automobiles are classified as craftsmen.[28]

Another occupational category which experienced a relatively large increase (33.2 percent) between 1960 and 1970 in Mississippi was the operatives (except

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[26]Employees in the manufacturing industry division in Mississippi amounted to 186,000 in 1970, up from 118,000 in 1960. See Bureau of the Census, Statistical Abstract of the United States, 1971, p. 219, and Bureau of the Census, Statistical Abstract of the United States, 1962, p. 223.

[27]The number of occupied housing units in Mississippi rose from 568,070 in 1960 to 636,724 in 1970. See Bureau of the Census, United States Census of Housing, 1960, Mississippi, State and Small Areas, HC(1), No. 26, p. 5, and Bureau of the Census, General Housing Characteristics, Mississippi, 1970 Census of Housing, HC(1)-A26, p. 8.

[28]The dramatic increases in the number of cars and appliances in use in the State and Nation are shown in Bureau of the Census, Statistical Abstract of the United States, 1971, pp. 535 and 677.

transport) group. More employees (121,611) were included in this category than in any other in 1970. The 1970 Census revealed that about one in every six Mississippians in the employed civilian labor force was in this group.

Growth in the operatives group is a reflection of increased manufacturing in Mississippi in the 1960's, particularly garment manufacturing.[29] Dressmakers, packers, sewers and stitchers, and knitters are included in the operatives group, and all are used in the garment industry. In addition, manufacturing industries of almost every type use some combination of the operative occupations listed below: furnacemen, metal heaters, oilers and greasers, graders and sorters, power station operators, or smeltermen. The expansion in the number of employees in these occupations is attributable to the growing industrialization in the State from 1960 to 1970.

In the transport equipment operatives category, a modest increase of 16.4 percent was recorded for Mississippi from 1960 to 1970. Only 33,425 persons, or 4.6 percent of total State employed civilian labor force, were in this group in 1970.

Gains in this category during the decade are due to the State's growing personal income level and heightened level of consumption of services. In particular, the growth in this group may be assigned to the rising number of businesses where the pick-up and delivery of a good or service is involved, and where a driver is obviously needed. Examples are cleaning, food, and other commercial establishments. Increases in the transport equipment operatives category in

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[29]The number of workers in the textile mill and other fabricated textile product subdivision amounted to 32,687 in 1960 and to 46,071 in 1970. See Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26, p. 162, and Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C, p. 129.

Mississippi from 1960 to 1970 may also be a result of the rising use of motor truck transportation of manufactured goods, raw materials, agricultural products, and other goods.[30]

There was a slight gain (14.0 percent) in the sales workers category in Mississippi from 1960 to 1970. Almost 42,000 persons, or 5.8 percent of the employed civilian labor force, were in this group in 1970. Included were such occupations as retail salespersons, insurance agents, real estate agents and brokers, bond salesmen, newsboys, and others.

A greater orientation to services, larger incomes, and a general elevation in the standard of living in Mississippi have given rise to increases in the numbers in several occupations in this group during the decade. The more affluent the populace, as a rule, the greater the probability that they will buy insurance, read newspapers, and purchase their own home. Also, on an a priori basis, the greater the level of income, the greater will be the amount and variety of retail purchases; and the larger the number of sales of a good or service, other things being equal, the larger will be the number of salespersons needed.

Changing techniques in merchandising may have retarded the growth in the number of persons employed as retail salesmen between 1960 and 1970. However, the importance of face-to-face contact in selling, particularly of high budget items like insurance and real estate, will probably prevent a decline in the number of salespersons needed in the predictable future.

The occupational category in which the smallest increase, 12.4 percent, was recorded for Mississippi between 1960 and 1970 was the managers and administrators

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[30]The number of private and commercial trucks and buses rose from 183,000 in 1960 to 282,000 in 1970. See Bureau of the Census, Statistical Abstract of the United States, 1971, p. 535, and Bureau of the Census, Statistical Abstract of the United States, 1962, p. 564.

(except farm) group. Census figures show that 57,580 Mississippians held occupations in this category in 1970, or about one in every twelve employed persons in the State. Occupations included in this category are buyers, building managers and superintendents, credit managers, postmasters, public administration inspectors and officials, purchasing agents and buyers, and many others.

Changes in the types of distribution patterns in Mississippi and other states in recent years have had offsetting effects upon this occupational group. In retailing, the growth of chain retail outlets has probably caused a reduction in the number of smaller retail stores, and hence in the number of proprietors, but it has tended to augment the number of branch managers and officials. (This is not to deny that substantial economies of scale may not accrue to the large chain retail outlets.) On the other hand, the number of quick-food stores and quick-food restaurants has probably multiplied in the last decade in Mississippi. This has caused an increase in the number of people classified as proprietors.

There are other explanations for the growth in the managers and administrators group. More Mississippians lived in multiple dwelling units during the 1960's than in previous decades,[31] and this gave rise to the need for building managers and superintendents. Also, more credit was extended in the State during the decade than previously, thereby generating more jobs for credit managers.[32]

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[31]There were 71,871 structures with two or more living units in Mississippi in 1970, as compared to 53,582 in 1960. See Bureau of the Census, United States Census of Housing, 1960, Mississippi, State and Small Areas, HC(1), No. 26, p. 8, and Bureau of the Census, General Housing Characteristics, Mississippi, 1970 Census of Housing, HC1-A26, p. 8.

[32]For example, loans and discounts in Mississippi state and national chartered commercial banks as of June 30, 1970 amounted to $1,688,255,270, as compared to only $540,868,354 on June 15, 1960. See Mississippi State University, Mississippi Statistical Abstract, 1971, p. 386.

In addition, as manufacturing concerns in Mississippi grew in size and complexity during the intercensal period under consideration, there was created a need for additional purchasing agents, buyers, and other managers or officials. Certain governmental occupations in Mississippi which are included in this category also grew in number from 1960 to 1970.

Decreases occurred in four occupational categories in Mississippi from 1960 to 1970: farmers and farm managers, farm laborers and farm foremen, laborers (except farm) and private household workers. The largest declines were in the (1) farmers and farm managers and (2) farm laborers and farm foremen categories, where decreases of 71.4 percent and 60.4 percent, respectively, were recorded. Both these groups have relatively small numbers in them. A total of 20,697 persons, or 2.9 percent of the employed civilian labor force in the State in 1970, were in the farmers and farm managers category, and 25,621 persons, or 3.6 percent of the employed civilian labor force, were farm laborers or farm foremen. These categories were numerically of lesser importance than any others in the State in 1970.

Declines in the farm categories in Mississippi in the 1960's are part of a continuing trend, as farmers and farm laborers have for several decades migrated to urban areas (within and without the State) to seek employment in industry.[33] The migration from farms has been both a cause and an effect of a decrease in the number of farms. There has also been a consolidation of farmlands into fewer holdings, and an increase in the average size of farms.[34] Both these phenomena are

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[33]As recently as 1950, 299,281 persons in Mississippi were in farm related categories, as compared to 20,697 persons in 1970. See Bureau of the Census, 1950 United States Census of Population, Mississippi, General Characteristics, p. 33, and Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26, p. 160.

[34]The number of farms in Mississippi decreased from 138,098 in 1959 to 95,000 in 1970; and the amount of land in farms declined from 18,630,000 acres to 17,500,000 acres in the same period. The average size of farms obviously increased considerably during the decade. See Bureau of the Census, Statistical Abstract of the United States, 1964, pp. 611 and 616, and U. S. Department of Agriculture, Agricultural Statistics, 1971, p. 441.

basically a result of the broader application of technology to farming in Mississippi during the decade. Labor saving devices and techniques are readily applicable and have had a great impact in the farming industry. Farmers today use more efficient growing methods, better seeds and feeds, better fertilizers, improved selective breeding of grain and livestock, and more mechanization than ever before. All this enables the farmer to be more productive, and to use fewer employees.

At the same time as the production curve for agricultural products was shifting upward, the population was growing more slowly than in earlier periods of the State's history;[35] a natural labor market result was a decline in the demand for agricultural workers. Thus population growth, a demographic variable, also played a role in the displacement of farmers and farm workers in Mississippi during the 1960's.

A very small decrease of 1.1 percent occurred in the laborers (except farm) category from 1960 to 1970 in Mississippi. Workers in this group totaled 41,796 in 1970, or 5.8 percent of the total employed civilian labor force. Occupations in this category include car washers, fishermen, longshoremen, woodchoppers, and others. Jobs in this occupational group are particularly susceptible to automation.

A substantial decline (38.1 percent) was also recorded in the private household workers group in Mississippi during the 1960's. Private household workers constituted 4.1 percent of the State's total employed civilian labor force in 1970, amounting to 29,640 persons.

Several factors may help to explain the contraction in the private household workers category in Mississippi in the 1960 to 1970 decennial period. First, workers in this group may have found better job opportunities elsewhere. Almost

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[35]See Hollman and Rungeling, Mississippi's Population (1960-1970): General Characteristics, pp. 11-14.

any position in either of the other eleven occupational categories wou'd pay more attractive wages and probably provide considerably better fringe benefits (such as workmen's compensation) than jobs in the household category. Blacks, who tend to predominate in this area, were better educated and trained during the 1960's, possessed a greater self-identity, and probably became more aware of openings in other categories. All this helped to reduce the reservoir from which workers in this category have traditionally been drawn. Also, it appears that older blacks are seeking to avoid menial and servile tasks in this group and young blacks are understandably reluctant upon initial entry into the labor force to choose jobs in the private household workers category.[36]

Second, during the 1960's women in Mississippi and the Nation were marrying later, postponing the birth of the first child to a later time, and having fewer children. Implications of these phenomena for private household workers were numerous. Fewer babysitters and laundresses were needed; and, with a diminished number of individuals in the family, there was a tendency for families to live in smaller houses, or in mobile homes or apartments.[37] With less living space, less cleaning was required, and this may have lessened the need for domestics.

Third, automation in the home enabled the more affluent middle class housewife to perform more household chores. In the 1960's more Mississippi women than ever before used such labor saving devices as the vacuum cleaner, microwave oven, automatic dishwasher, automatic washers and dryers, and many small electrical appliances. These devices have reduced the drudgery and toil of many

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[36] Susan Holland, "The Employment Situation for Negroes," Employment and Earnings and Monthly Report of the Labor Force, Volume 14, No. 3 (September, 1967), p. 11.

[37] Kenneth W. Hollman and Brian S. Rungeling, "Recent Shifts in Mississippi's Housing Patterns," Mississippi's Business, Volume 30, No. 5 (April, 1972), pp. 1-7.

time-consuming household tasks. Also, synthetic fabrics with the wash and wear quality have further reduced household chores; and the appearance of automatic laundries and quick-order delivery groceries and restaurants further helped to eliminate or minimize household tasks. In addition, food preparation has been simplified, with more emphasis being placed on speed and convenience, and less on taste. In short, homes, home appliances, and home accessories tended to become more functional during the decade, thereby eliminating or lessening the strain of many housekeeping chores, and also reducing many of the tasks which were formerly performed by private household workers in Mississippi and other states. This trend is expected to continue into the future.[38]

Summary. It has been shown in this section that there is a close relationship between the occupational distribution of the employed civilian labor force in Mississippi and the level of technological development. The application of scientific findings to industry, agriculture, and in the home has been an important factor in occupational shifts in the 1960's. This application has expanded some occupations and contracted others, created some jobs and destroyed others, and changed the skill requirements of still others. It would be difficult to overestimate the impact of increasing mechanization upon the occupational configuration of the labor force in the Mississippi economy in the 1960's.

Among the most notable of the changes in the occupational composition of the employed Mississippi civilian labor force in the past decade was a significant decrease in the number of people employed in the farm related categories. This

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[38]See William Lazer, John E. Smallwood and others, "Consumer Environments and Life Styles of the Seventies," MSU Business Topics, Volume 20, Number 2 (Spring, 1972), pp. 1-17.

decline was primarily a result of the increased mechanization of farms. Lesser but substantial decreases occurred in the private household workers groups. This was a result of the expanded application of technology to the home. Only one occupational category, laborers (except farm), experienced practically no change during the decade. Every other category showed an increase with the greatest growth occurring in the professional, technical and kindred workers; clerical and kindred workers; and managers and administrators (except farm) groups. These increases are attributable to the recent orientation of the Mississippi economy toward the services sector, expanded industrialization, the growing complexity of occupations, and general rises in the level of consumer incomes and standards of living.

Occupational Distribution by Sex

In any study of the occupational distribution patterns of a state some attention must be devoted to the ratio of males to females in the several job categories. Changes in this ratio may be of greater effect and magnitude than any other. Examination of the changes in this ratio over time yields additional insights into shifts in employment trends.

In this section, attention will be focused upon the occupational distribution between men and women in Mississippi from 1960 to 1970. Emphasis will be placed on the rapidity with which women have moved up in the occupational hierarchy, since this is a subject of prime importance and of considerable discussion in the literature. Table VII presents selected data on this topic.

Increases for women were recorded in eight of eleven occupational categories in Mississippi from 1960 to 1970, and for men in eight of twelve categories.[39]

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[39]The 1960 Census did not list a "Transport Equipment Operatives" category or similar group for females.

TABLE VII

COMPOSITION OF THE EMPLOYED CIVILIAN LABOR FORCE BY MAJOR OCCUPATION AND SEX IN MISSISSIPPI, 1970

Major Occupation	Women				Men			
	Number	Percentage Change from 1960	Percentage of Total Female Labor Force	Women as a Percentage of Total Labor Force in this Occupation	Number	Percentage Change from 1960	Percentage of Total Male Labor Force	Men as a Percentage of Total Labor Force in this Occupation
Professional, Technical and Kindred Workers	43,578	+69.9	15.6	49.5	44,391	+53.8	10.1	50.5
Managers and Administrators, Except Farm	10,517	+24.1	3.8	18.3	47,063	+10.0	10.7	81.7
Sales Workers	16,339	+15.0	5.8	38.9	25,623	+13.4	5.8	61.1
Clerical and Kindred Workers	66,398	+72.5	23.8	73.6	23,759	+30.0	5.4	26.4
Craftsmen, Foremen, and Kindred Workers	5,316	+156.2	1.9	5.4	92,875	+35.3	21.1	94.6
Operatives, Except Transport	55,262	+44.6	19.8	45.4	66,349	+24.9	15.1	54.6
Transport Equipment Operatives	2,308	*	.8	6.9	31,117	+ 8.4	7.1	93.1
Laborers, Except Farm	3,030	+175.0	1.1	7.2	38,766	- 5.8	8.8	92.8
Farmers and Farm Managers	1,006	-82.2	.4	4.9	19,691	-70.5	4.5	95.1
Farm Laborers and Farm Foremen	1,969	-83.9	.7	7.7	23,652	-54.9	5.4	92.3
Service Workers, Except Private Household	44,821	+54.4	16.0	63.8	25,478	+35.2	5.8	36.2
Private Household Workers	28,866	-38.6	10.3	97.4	774	-14.8	.2	2.6
Total	279,410		100.0		439,538		100.0	

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26 (Washington: U. S. Government Printing Office, 1972), p. 160, and U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U.S. Government Printing Office, 1961), p. 126. Percentage computations are by the authors.

*There was no "Transport Equipment Operatives" category for females in 1960.

These changes are partially a result of the increased number of both men and women in the State. In every group where expansions were recorded for both males and females during the decade, the relative increase was greater for women than for men. Also, in every category where both sexes experienced declines, the relative decrease was greater for women than for men. This accounted for ten of the eleven categories. However, in one category women experienced an increase while a decrease was recorded for men.

The largest relative increase for women in Mississippi in the 1960's, 175.0 percent, occurred in the laborers (except farm) category. However, only 3,030 women, or 1.1 percent of the employed female labor force, were in this group in 1970. In contrast, 38,766 men, or 8.8 percent of the males employed in the State, were classified as laborers. The number of men in this area decreased by 5.8 percent from 1960 to 1970.

Female workers comprised only 7.2 percent of the total number of employees in the laborers (except farm) category in Mississippi in 1970. This underrepresentation may be a result of the conventional belief that some jobs are "women's jobs," while other are "men's jobs." This kind of prejudice, based on erroneous assumptions about the capabilities of females, tends to discourage the entry of women into many occupations. Such attitudes form very effective discriminatory sexual barriers, and have probably been more restrictive of equal female participation in certain occupations than any real differences in the abilities of men and women to perform these activities.[40]

Almost every job in this occupational group requires lifting or other physical exertion and/or fatigue, or in some other way is considered to be an unattractive

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[40] Janice Neipert Hedges, "Women Workers and Manpower Demands in the 1970's," in Richard L. Rowan (ed.), Readings in Labor Economics and Labor Relations (Homewood, Illinois: Richard Irwin, Inc., 1972), p. 52.

and unpleasant job. This helps to explain why there has traditionally been a concentration of males in this area. The relatively large (albeit small absoiute) entry of women into this category in Mississippi in the intercensal period under study indicates that, contrary to past popular opinion, women possess the basic physical strength and agility requirements to perform many jobs from which they were formerly excluded.

In the craftsmen, foremen, and kindred workers group, women experienced a very sizeable gain, 156.2 percent, during the decade in Mississippi. This was also an area where women were not as heavily represented as men; only 5,316 females, or 1.9 percent of the State's female employees, were in this group in 1970. On the other hand, there was a growth of 35.3 percent in the number of males employed in this group; 92,875 men, or 21.1 percent of the employed males in the State, were classified as craftsmen, foremen, or kindred workers in 1970.

Significant gains were also scored by women in Mississippi in the clerical and kindred workers category, where an increase of 72.5 percent was recorded for the 1960 to 1970 decennial period. More women were in this area than in any other in Mississippi in 1970; a total of 66,398, or 23.8 percent of the female labor force were so employed. Males employed in this group expanded by 30.0 percent in the same period, up to 23,759 by 1970; this number constituted approximately 5 percent of all male employees. About 30 percent of the workers in the clerical group were male in 1970.

Jobs in the clerical category are traditional "female occupations." As the economy has shifted from the production of goods to the production of services, more clerical positions have been created. Importantly, women have tended to gravitate even more to these positions as their numbers in the labor force have increased. As a result, females have solidified their dominant position in this

category in Mississippi in recent years.[41]

The concentration of women in the clerical and kindred workers category has been further reinforced by the educational system of the State of Mississippi and the country. Much of the curriculum in secondary schools is designed to prepare women for entry into occupations in the clerical and kindred workers group. Examples are the courses in typing, shorthand, and bookkeeping, which have traditionally been more popular with women than with men.[42]

The number of women in the professional, technical, and kindred workers group also expanded by a substantial degree in Mississippi in the 1960 to 1970 intercensal period. Females in this category rose from 25,649 to 43,578 during the decade, an upward adjustment of 69.9 percent; over 15 percent of the employed females in Mississippi in 1970 were in this area. On the other hand, 44,391 males were classified as professional, technical, or kindred workers in 1970, over 50 percent more than in 1960. The 1970 Census showed that approximately 10 percent of the employed males in the labor force held jobs in this category.

Women accounted for almost half of the total number of persons employed in this group in 1970. This sizeable representation may be explained by the fact that several professions in this category, such as dieticians, registered nurses, dental hygenists, and elementary and secondary school teachers are dominated by females. Women logically have tended to be drawn to these professions, since each involves work which is an extension of tasks performed in the home. Furthermore, in this category as well as others, women have continued to concentrate in occupations where sexual discrimination barriers were broken initially. Women

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[41] Perrella, "Women and the Labor Force," p. 4.

[42] Ibid.

have traditionally entered several of the occupations in the professional, technical, and kindred workers category,and as the Mississippi economy has expanded in the 1960's and become further weighted toward the services sector, the growth rate has naturally been greatest in these occupations.

Females in the service workers (except private household) category showed an increase of 54.4 percent during the decade of the 1960's. Almost 45,000 women, or about one in every six employed females in the State, were in this group in 1970. Women constituted almost 64 percent of the total persons in this category. Male workers in the service workers group totaled 25,478 in Mississippi in 1970, an enlargement of 35.2 percent from 1960; 5.8 percent of the employed males in the State were in this area in 1970.

The increase for women in this category in Mississippi in the decade under consideration is easily explained. Many of the extremely diverse occupations in this group are performed almost exclusively by women, such as chambermaids, maids, cleaners, charwomen, nursing aides, practical nurses, midwives, airline stewardesses, hairdressers, cosmetologists, and housekeepers. The number of workers in most of these occupations rose during the 1960's, but men seem to have entered them only on a limited scale. On the other hand, women have made substantial progress in entering occupations in this category which are dominated by men, such as the protection service occupations. The net result was an increase of women in occupations in this category in Mississippi during the 1960's.

The significant growth in the number of women, particularly unskilled women, in this area may partially be a function of the decline in employment in the agricultural sector. This decline released many women with minimum skills for employment elsewhere.

There were 44.6 percent more women in the operatives (except transport) category in 1970 than in 1960 in Mississippi. Over 55,000 women, or 19.8 percent of

the employed female labor force in 1970, were employed in this group. More men, 66,349, or 15.1 percent of the employed males in 1970, were employed in this area than in any other except the craftsmen group. Almost 25 percent more men were working in this category in 1970 than in 1960. The increase of women in the operatives (except transport) group is a reflection of the concentration of women in the garment and other low-value-added and nondurable goods industries in the State in 1970. These industries tend to be labor intensive, and this may explain their presence in Mississippi.

Over 16,000 women in Mississippi were employed as salesworkers in 1970, an expansion of 15.0 percent over 1960. Just under 6 percent of the employed females in the State in 1970 were in this category. More than 25,000 men were classified as salespersons in 1970, or 5.8 percent of the State's employed male labor force. About 13 percent more males were employed in this group in 1970 than in 1960.

Census figures show that the number of female employees diminished in three categories from 1960 to 1970 in Mississippi. The largest decreases, 82.2 percent and 83.9 percent, were recorded in the farmers and farm managers, and farm laborers and farm foremen categories, respectively. Female farmers and farm managers, and farm laborers and farm foremen are practically nonexistent in Mississippi; there were only 1,006 of the former and 1,969 of the latter in the State in 1970. The same general trends were recorded for men, though the decline was less in each case. Male farmers and farm managers totaled 19,691 in 1970, or 70.5 percent fewer than in 1960; and male farm laborers and farm foremen amounted to 23,652, a decrease of 54.9 percent from the figure recorded in 1960. Together, the farm related categories accounted for about 1 percent of the employed females in Mississippi in 1970, and about 10 percent of the employed males.

A decrease was also recorded for women in the private household workers category. A total of 28,866 females were in this group in 1970 in Mississippi, 38.6

percent fewer than in 1960. Over 10 percent of the total employed females were in this group in 1970. Males in this category numbered 774 (2.6 percent of the total) in 1970, a decline of 14.8 percent during the ten year period. This number accounted for less than 1 percent of the employed men in Mississippi in 1970.

Many of the employees in this category worked part-time, particularly black women, so the figure cited here may conceal the true numbers. Many are also probably young, such as those who are classified as babysitters. The number of women in this category will probably continue to decline as more attractive jobs become available and women become better trained.[43]

Several reasons have been cited to explain why women entered the labor force and moved up the occupational hierarchy in Mississippi during the 1960 to 1970 decennial period. One cause that has not been discussed is that many discriminatory barriers have been broken. Women have insisted on entering occupations and receiving pay commensurate with their abilities. The feminist movement, which is basically a reflection of the increasing self-awareness of women, gathered momentum in the 1960's, and women came to view themselves as equals of men not only in social and political affairs, but also in employment. Females today are better educated, and consider themselves to be more valuable to employers; they are therefore demanding equal pay, promotion, and working conditions in their employment. Women no longer see themselves as servants of their families and husbands, but instead as family members with the same status, rights, and responsibilities as other members.[44]

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[43]Claire C. Hodge, "The Negro Job Situation: Has it Improved?" Monthly Labor Review, Volume 92, No. 1 (January, 1969), p. 24.

[44]Lazer, Smallwood, and others, "Consumer Environments and Life Styles of the Seventies," pp. 1-17.

Summary. Both the female and male labor forces in Mississippi changed greatly from 1960 to 1970. This section has focused upon the transformation in the female sector of the labor force.

Women experienced decreases in the farm related and private household workers groups in the State during the decade. These declines are attributable to the increased application of scientific findings on the farm and in the home. Women showed the largest gains in the laborers (except farm), and craftsmen, foremen, and kindred workers groups. These were categories where the demand for laborers was particularly great, which probably induced employers in these areas to hire more women and other minority groups. Substantial growth in employment was recorded for women in the clerical and kindred workers group also. Women have traditionally concentrated in this occupational category, and as their participation rate has risen, the overrepresentation has continued. Women experienced positive but lesser gains in the remaining groups.

Women have not only participated in the labor force to a greater degree in the 1960's in Mississippi, but they have moved up in the occupational hierarchy. Possible reasons are the increased educational attainment of females, shifts in industry which have created more high-skill jobs for both sexes, technological improvements in industry which have permitted women to enter more occupations, and the elimination of barriers to female entry in many occupations. Possibly more important than either of these is a new and increased awareness by females of their capabilities and rights, and their insistence that they be treated equally with males in all endeavors.

Occupational Distribution by Race

Data regarding the racial composition and trends of State populations are

meaningful in several respects. Such data are often used to determine the progression or retrogression which nonwhites are making in achieving equality with whites in economic, political, social, or other areas. One of the most frequently used indicators of the status of nonwhites in the economic area is their occupational configuration--the distribution of their means of livelihood between less desirable and more desirable positions--and the changes in this structure over time.

Significant improvements were made in the number and kinds of jobs held by nonwhites in Mississippi in the 1960 to 1970 intercensal period. However, nonwhites still occupy a disproportionate number of jobs at the lower rungs of the occupational ladder, while whites tend to predominate at the upper extremes, where better pay and working conditions exist. This section is an evaluation of the degree of occupational progress of Negroes which took place in Mississippi during the decade of the 1960's. Table VIII presents the tabular data for each of the occupational categories.

Whites in Mississippi experienced decreases in three of the twelve occupational groups from 1960 to 1970. Nonwhites, on the other hand, experienced declines in four groups. Both races lost employees in the agricultural and private household workers occupations, and gained in the professional, technical, and kindred workers; clerical and kindred workers; craftsmen, foremen, and kindred workers; and other categories during the decade.

The greatest percentage increase for nonwhites in Mississippi in the decade of the 1960's occurred in the clerical and kindred workers group. Over 8,000 nonwhites were in this group in 1970, an expansion of 245.9 percent over 1960. However, less than 4 percent of the nonwhite laborers in the State were classified as clerical or kindred workers in 1970, as compared to 16 percent of the white workers. Fewer than one in ten persons employed in this category in 1970 was black. The 1970 Census figures show that whites in this group totaled 82,031.

TABLE VIII

COMPOSITION OF THE EMPLOYED CIVILIAN LABOR FORCE BY MAJOR OCCUPATION AND RACE IN MISSISSIPPI, 1970

Major Occupation	Nonwhites				Whites			
	Number	Percentage Change from 1960	Percentage of Total Nonwhite Labor Force	Nonwhites as a Percentage of Total Labor Force in this Occupation	Number	Percentage Change from 1960	Percentage of Total White Labor Force	Whites as a Percentage of Total Labor Force in this Occupation
Professional, Technical and Kindred Workers	17,792	+75.5	8.6	20.2	70,177	+58.1	13.7	79.8
Managers and Administrators, Except Farm	3,841	+33.4	1.9	6.7	53,739	+11.1	10.5	93.3
Sales Workers	2,428	+35.0	1.2	5.8	39,534	+12.9	7.7	94.2
Clerical and Kindred Workers	8,126	+245.9	3.9	9.0	82,031	+50.8	16.0	91.0
Craftsmen, Foremen, and Kindred Workers	17,281	+45.8	8.4	17.6	80,910	+37.5	15.8	82.4
Operatives, Except Transport	36,584	+64.1	17.8	30.1	85,027	+23.2	16.6	69.9
Transport Equipment Operatives	13,119	+15.0	6.4	39.2	20,306	+17.3	4.0	60.8
Laborers, Except Farm	23,761	-14.9	11.5	56.8	18,035	+26.0	3.5	43.2
Farmers and Farm Managers	4,692	-85.7	2.3	22.7	16,005	-59.5	3.1	77.3
Farm Laborers and Farm Foremen	17,783	-66.0	8.6	69.4	7,838	-37.0	1.5	30.6
Service Workers, Except Private Household	33,003	+29.1	16.0	46.9	37,296	+67.1	7.3	53.1
Private Household Workers	27,392	-38.5	13.3	92.4	2,248	-32.3	.4	7.6
Total	205,802		100.0*		513,146		100.0*	

Source: U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)C26 (Washington: U.S. Government Printing Office, 1972), p. 160, and U.S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1960, General Social and Economic Characteristics, Mississippi, PC(1)-26C (Washington: U. S. Government Printing Office,1961), p. 126. Percentage computations are by the authors.

*Totals do not add to 100.0 due to rounding.

about 50 percent more than in 1960.

Increases by nonwhites in the clerical category may be explained by the fact that educational requirements in this category are modest, usually a high-school diploma. Low income families, where most nonwhites in Mississippi are found,[45] are often financially able to support a child through high school; but they usually find the expenses of higher education prohibitive. Thus many nonwhites in the State have the educational prerequisites for clerical positions, but not for professional, technical, management, and other higher paying occupations.[46]

In this category as well as the four or five which immediately follow, employment opportunities for nonwhites as well as whites grew very fast during the decade in Mississippi. However, the number of clerical jobs increased faster than proportionately, due to the growing complexity of the economy and the tendency toward more record keeping in all industries. This worked to the advantage of nonwhites because, as a rule, the most rapid occupational advances of minority races have historically occurred in the rapidly growing fields, where opportunities for minorities are plentiful, hiring needs by employers are greater, turnovers higher, and upgrading more prevalent. Nonwhites have gained access very slowly into occupations and industries which are stable or growing slowly.[47]

The next largest growth for nonwhites in Mississippi in the 1960's was in the professional, technical, and kindred workers group, where an increase of 75.5 percent was recorded. This group contained 17,792 nonwhite workers in 1970, or

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[45]The median income of nonwhite families in Mississippi in 1970 was $3,202, but it was $7,578 for whites. See Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, Mississippi, PC(1)-C26, p. 166.

[46]U. S. Department of Labor, "Employment Trends: Projections and Implications," p. 39.

[47]Hodge, "The Negro Job Situation: Has it Improved?" pp. 24 and 28.

8.6 percent of the total nonwhites employed; about 20 percent of the total number of workers in the category were black in 1970. Whites experienced a smaller percentage increase, 58.1 percent, than did nonwhites during the decade. Almost 14 percent of the employed whites in Mississippi in 1970 were in this category.

Upgrading in the professional, technical, and kindred workers category for nonwhites is expecially significant, since the pay scales, working conditions, security, probability of advancement, and prestige of occupation are greater for jobs in this group than in most other groups. The relatively large movement of nonwhites into this area has caused a marked improvement in the occupational configuration of blacks in Mississippi in the last decade. Nonwhites have made substantial progress in a short period of time in this category.

The increases of blacks in the professional, technical, and kindred workers group may be a reflection of higher education levels among nonwhites in the State. Upward occupational mobility is obviously partially dependent upon job qualification and training, and nonwhite educational attainment has risen in recent years. A natural and expected result is a favorable occupational adjustment for nonwhites in the upper skill level categories, such as the professional, technical, and kindred workers group.

Nonwhites in Mississippi in the operatives (except transport) category also advanced significantly on a relative basis (64.1 percent) during the 1960 to 1970 intercensal period. This category was numerically of greater importance than any other in Mississippi in 1970, with 36,584 persons, or 17.8 percent of the total employed nonwhite labor force. This category also contained a larger number of whites than any other (85,027, or one out of every six white workers). This number represented an increase of about 23 percent during the decade, and amounted to almost 70 percent of the total number of employees in Mississippi in this group.

Workers in the operatives category are semi-skilled, and the pay in some of

these occupations is often quite good. The movement into this area by nonwhites in Mississippi during the 1960's is therefore an encouraging aspect for minority race occupational upgrading; importantly, many of these workers probably came from the agricultural sector, where the skills and pay are lower. Limited educational attainment has not proven to be a significant barrier to nonwhite entry into this group.

Nevertheless, the large number of nonwhites in the operatives category indicates that minority races are still overrepresented in the more dangerous, physically demanding, and most disagreeable occupations. Jobs in these groups often pay less, are less secure, and have less prestige associated with them than jobs in the professional, managerial, clerical, and other white collar or blue collar jobs.

Nonwhites in the craftsmen, foremen, and kindred workers group increased by 45.8 percent in Mississippi from 1960 to 1970, up to 17,281. This number accounted for 8.4 percent of the total nonwhite workers in the labor force and 17.6 percent of the total number of persons in this category in 1970. A total of 80,910, or 15.8 percent of the employed whites in the State, were classified as craftsmen, foremen, or kindred workers in Mississippi in 1970, a rise of 37.5 percent from 1960.

The significant upgrading in this category by nonwhites in Mississippi during the decade may be explained by their relatively high concentration in this category in 1960. As noted above, nonwhites and other minority groups tend to gravitate to those areas where discriminatory racial barriers were first broken. Entry into the more desirable openings in this category have helped to raise the income levels of nonwhites in the State, since jobs in this group are at the upper end of the occupational hierarchy, where higher skills and better pay scales exist.

Nonwhites enjoyed substantial success in integrating the sales workers category in Mississippi in the ten year period from 1960 to 1970, but less than in any of

the above mentioned categories. The relative enlargement was 35.0 percent, up to 2,428 in 1970. On the other hand, a total of 39,534 whites were employed in this group in 1970, an increase of 12.9 percent from 1960. There was far more specialization by whites than nonwhites in sales occupations in 1970; almost 8 percent of the total whites employed in the State were in this category, as compared to 1.2 percent of the nonwhites.

Nonwhites are far underrepresented in the sales workers category; Census figures show that only 5.8 percent of those holding selling positions in Mississippi in 1970 were nonwhite. This was the lowest participation by nonwhites, on a relative basis, in any of the twelve occupational groups. An explanation for this lack of acceptance is that the social aspects of selling, including the belief that whites might be reticent about buying from nonwhites, have restricted the options of sales employers in their hiring practices. There may be a tendency for white employers, out of self interest and not necessarily prejudice, to selectively hire and promote in such a way that nonwhites are deprived of equal employment and advancement opportunities. Such discriminatory practices tend to widen the disparity which presently exists between nonwhite workers and their white counterparts of equal education, ability, and motivation.[48] This is not to imply that the relative increase by nonwhites in this category was not encouraging in the 1960 to 1970 decennial period.

In the managers and administrators (except farm) category, nonwhites also made notable progress in the State in the 1960 to 1970 decennial period. A total of 3,841 nonwhites, or 1.9 percent of the total nonwhite employed labor force in

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[48]Staff of the Harvard Law Review, "Title VII, Seniority Discrimination, and the Incumbent Negro," in Richard L. Rowan (ed.), Readings in Labor Economies and Labor Relations (Homewood, Illinois: Richard D. Irwin, Inc., 1972), pp. 603-604.

Mississippi, were classified as managers or administrators in 1970; this amounts to a comparatively favorable 33.4 percent increase during the decade. By way of comparison, whites in this category numbered approximately 54,000 in 1970, an increase of over 10 percent from 1960.

Only 6.7 percent of the total number of workers classified as managers or administrators were nonwhite in Mississippi in 1970. This racial imbalance exists because jobs in this category generally require considerable education, training, and experience, and in the case of owner-operated businesses, adequate capital, all of which are probably more readily available to whites than blacks. Possible reasons for the limited entry of nonwhites into this group during the 1960's are: generally low educational attainment, lack of training for upgrading, inexperience, restriction of minority businesses to undesirable geographic locations, and limited financial resources.[49]

The lack of opportunity for education and training may be the heaviest burden which the nonwhite businessman bears. Most nonwhite businesses, like most white businesses, fail because of bad management. Nonwhite entrepreneurs in Mississippi and other states have little opportunity to learn management skills. Discrimination exists in many industries so that the minority worker cannot learn the skills on the job in many cases. Also, not many nonwhites are descended from businessmen, so that the skills cannot be passed from generation to generation. In addition, nonwhites in many instances do not have access to university training in the management arts, due to entrance requirements, limited financial resources, and other reasons. Therefore, nonwhites have little chance to acquire the skills necessary to operate a business.

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[49] Don H. Alexander, "What Do You Want, Mr. Black Businessman?" Economic Leaflets (University of Florida, Bureau of Economic and Business Research), Volume XXX, No. 1 (January, 1971), pp. 1-4.

Another disadvantage faced by the nonwhite businessman in Mississippi and elsewhere is that he usually has to locate in the nonwhite community, where unemployment is often high and more people are on welfare. Also, crime rates are usually higher in such disadvantaged areas, so he must charge more for his product or service to cover insurance costs.[50] In addition to these problems, the nonwhite businessman may experience more difficulty in securing bank credit than his white counterpart. Furthermore, adequate insurance coverage is difficult for him to purchase, particularly at reasonable prices. Such discriminatory financial barriers often prove insurmountable to nonwhite businessmen in Mississippi and other states.

These factors have in combination made nonwhite entry into the managers and administrators (except farm) category in the State a process of Herculean proportions. However, despite the painfully slow progress made by the State's minority races in recent years, there are several reasons for optimism. Nonwhites in Mississippi and other states developed, in addition to a new self-awareness of their race and culture, a new economic pride during the 1960's. One manifestation of this pride is "black capitalism" which is basically an effort by nonwhites to be producers and distributors of goods, and not merely consumers; it implies an independence and self sufficiency necessary for success in business. Also, the federal government has developed programs to educate and train nonwhites to enter certain occupations, and it has made massive efforts to break down discriminatory practices in hiring, promotion, and dismissal policies. Another reason for optimism is that many white owned private businesses have accepted large numbers of nonwhites in their training program; and more financial institutions are investing money in the nonwhite community. Additionally, more nonwhites are majoring in

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50 Ibid., and Neil W. Chamberlain and Donald E. Cullen, The Labor Sector (2nd ed.; New York: McGraw-Hill Book Company, 1971), p. 33.

business and more are receiving MBA degrees than previously. All these factors give rise to guarded optimism that nonwhites will be better represented in the managers and administrators category in the future in Mississippi and the rest of the country.[51]

In contrast to their decided underrepresentation in the managers and administrators category, nonwhite workers in Mississippi were overrepresented in the service workers (except private household) group in 1970. This group contained 33,003 nonwhites in 1970, an increase of 29.1 percent over 1960, and was the second most important category in numerical terms in the State. About one nonwhite employee in every six was a service worker in 1970. The number of whites in this category in the State rose by 67.1 percent during the decade, so that one in every fourteen white workers was in the services group in 1970. About 53 percent of the total number of persons in the category were white.

Whites also outnumbered nonwhites in the transport equipment operatives category in Mississippi in 1970. Nonwhite transport operatives amounted to 13,119 in 1970, an enlargement of 15.0 percent over 1960, while whites classified as transport operatives totaled 20,306, a relative growth of 17.3 percent during the decade. Over 6 percent of the nonwhites employed in Mississippi in 1970 were in this group, as compared to about 4 percent of the whites.

Losses were experienced by nonwhites in four occupational categories in the ten year period from 1960 to 1970 in Mississippi. The largest relative losses were sustained by the farmers and farm managers, and farm laborers and farm foremen categories. Lesser declines occurred in the private household workers and laborers (except farm) groups.

There were 4,692 nonwhite farmers and farm managers in Mississippi in 1970,

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[51] Ibid., and Hodge, "The Negro Job Situation: Has it Improved?" p. 24.

a dramatic 85.7 percent decrease from 1960. Only about 2 percent of the nonwhite workers in the State were farmers or farm managers in 1970. On the other hand, whites in the farmer and farm managers group diminished by 59.5 percent during the decade, down to 16,005 in 1970. While only 3 percent of the white workers in Mississippi in 1970 were in this category, slightly more than three-fourths of the farmers and farm managers in Mississippi in 1970 were white.

General sociological changes in living patterns during the 1960-1970 decennial period caused a very large decrease, 66.0 percent, in Mississippi in the nonwhite farm laborers and farm foremen category. By 1970, the number had declined to 17,783, which constituted 8.6 percent of the State's total employed nonwhite laborers. Whites also experienced a sizeable decline, 37.0 percent, in the farm laborers and farm foremen group. A total of 7,838 whites, or 1.5 percent of the total number of white laborers in Mississippi in 1970, were in this category. About 70 percent of the total farm laborers and farm foremen in the State were nonwhite in 1970.

The farmers and farm managers, and farm laborers and farm foremen categories, showed greater decreases for nonwhites than for the labor force as a whole from 1960 to 1970 in Mississippi. This is partially a result of mechanization in farming and the concentration of farm holdings. Since about 70 percent of the farm laborers and farm foremen in the State were nonwhite in 1960, the impact of mechanization has naturally been greater on nonwhites in this category than on their white counterparts.

With regard to farmers, the greater decline for nonwhites may be explained by the fact that since nonwhite farmers have lower incomes than white farmers, they are more likely to fail when adverse economic conditions prevail. In any economic endeavor, the marginal producer is the first to succumb. Those farmers who fail, and some of those who decide for other reasons to leave farming, are often

absorbed by the larger farms which are usually owned by whites. The net result is a greater relative decline for nonwhites than whites in the two farm related occupational categories.

In the private household worker category, the relative decline for nonwhites (38.5 percent) was approximately equal to the decrease for whites (32.3 percent), though far more nonwhites held positions in this group than whites (27,392 to 2,248). About 13 percent of the total nonwhite labor force in Mississippi was in this category in 1970, as compared to less than 1 percent of the employed whites.

Nonwhite women have tended to dominate in this area; they are often forced into the job market because of economic pressures to augment generally low family incomes, and they may perform more than one type of job. However, as houses and families have become smaller, there has been less need for domestics. This trend has been accentuated in recent years, as the home has felt the impact of mechanization, so that less help is needed for many domestic chores. As a result, the demand for private household workers has decreased and the number has dwindled. More attractive pay and better working conditions have encouraged nonwhite women to enter other categories, as has government efforts to force employers to hire and promote women on an equal basis with men.[52]

There was only one occupational category in Mississippi in which the number of nonwhites and whites diverged during the decade of the 1960's. Blacks in the laborers (except farm) group decreased by 14.9 percent, down to 23,761 in 1970, while the number of whites in the group increased by 26.0 percent, up to 18,035. About 12 percent of the total employed nonwhite labor force in the State was in this group in 1970, as compared to 3.5 percent for whites. Over 43 percent of the

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[52]U. S. Department of Labor, "Employment Trends: Projections and Implications," p. 28.

total number of workers in this category were white in Mississippi in 1970.

Summary. The preceding analysis sheds light on the occupational patterns by race in Mississippi in 1970, and the changes which occurred in this configuration during the decade. The simultaneous comparison of nonwhites and whites helps to reveal the occupations in which nonwhites made the most progress; and the study of the changes in occupational patterns helps to show state manpower trends in the 1960 to 1970 intercensal period.

Nonwhites in Mississippi were concentrated in four occupational categories in 1970: operatives (except transport), service workers (except private household), private household workers, and laborers (except farm). These groups accounted for almost 60 percent of all nonwhites employed in the State in 1970. In contrast, only the operatives category among these four groups contained a relatively large number of whites in 1970. In addition to the operatives category, substantial numbers of whites were also employed in the clerical and kindred workers; craftsmen, foremen, and kindred workers; and professional, technical, and kindred workers groups. These four groups contained slightly over 60 percent of the total employed white Mississippians in 1970. Nonwhites in these categories, by way of comparison, comprised less than 40 percent of the total number of nonwhite employees in Mississippi in the same year.

It is clear that the largest relative increase in the number of nonwhites employed in the State occurred in the "white-collar" occupational categories--professional, technical, and kindred workers, and clerical categories--while the largest decreases for nonwhites occurred in the farm related and private household workers groups. Gains and losses for whites tended to follow the same pattern for these occupations, though the increases and decreases were less in most cases. Overall, significant occupational upgrading and diversification occurred among

the nonwhite population in Mississippi from 1960 to 1970. Nonwhites, however, are still overrepresented in the low wage occupations.

SUMMARY

This study has shown that the labor force in Mississippi has undergone considerable change in recent years. Fluctuations have occurred with regard to size, participation, sexual and racial composition, and occupational patterns. In 1970, Mississippi's labor force contained 779,495 people, or 53.1 percent of the State's over 16 population. Of this total, 38.6 percent were female and 29.1 percent were nonwhite. The majority of the labor force, 88.9 percent, was between 20 and 65 years of age, with 42.3 percent falling between 25 and 44 years of age.

The 480,498 males in the labor force in 1970 represented a labor force participation rate for this group of 69.4 percent. The rate for white males was 73.8 percent while that for nonwhite males was 59.9 percent. For white and nonwhite females the labor force participation rates were quite similar, 39.4 percent and 38.3 percent, respectively. There was a significant difference in the overall labor force participation rates in urban and farm areas, with the urban rate being 57.3 percent and the rural farm rate only 46.6 percent.

There was a small increase during the decade in the percentage of population who actively participated in the labor force. This is accounted for largely by a substantial increase in the number of women in the labor force; the male labor force actually declined slightly during the decade. Not only were more women in the labor force in 1970, but there was a marked increase in labor force participation rates by females during the 1960's; on the other hand, there was a decline in the labor force participation rates for males.

Nonwhites as a percentage of the total labor force declined substantially from 1960 to 1970. This decrease is due to a significant decline in the State's

nonwhite population during the decade and to a reduction in the labor force participation rate by nonwhite males. Reduced labor force participation by nonwhite males has placed greater family responsibilities on nonwhite females, and this is reflected in their increased labor force participation rates.

Shifts in the age distribution and in place of residence have had offsetting effects on labor force participation rates in Mississippi in the 1960's. There was a downward shift such that the number of people in the 18-24 age category increased significantly during the decade. However, there was a slight decline in the number between 16 and 20. Of this group, many who are available for work have limited education and job skills, and hence experience difficulty finding employment. This decline and the decline in workers over 65 had a moderating influence on the overall labor force participation rate. In contrast, the continued urbanization of the State during the decade for several reasons had a stimulative effect on labor force participation.

From an occupational viewpoint, important changes occurred during the decade. There was a significant increase in the higher skill level categories, such as professional, technical, and kindred workers; clerical and kindred workers; and managers and administrators, except farm, groups. Decreases were recorded in the farm related and private household workers groups. Causes of these changes are numerous and have not worked in isolation. Among the more important causes were rising incomes, expanded industrialization, and a greater inclination toward the services sector.

Four major occupational categories accounted for over 50 percent of the total employed civilian labor force in 1970. These categories were professional, technical and kindred workers, 12.2 percent; clerical and kindred workers, 12.5 percent; craftsmen, foremen, and kindred workers, 13.7 percent; and the largest single category, operatives, except transport, which accounted for 16.9 percent of the

employed labor force. Four occupational categories had less than 5 percent of the employed civilian labor force each. These were the transport equipment operatives; farmers and farm managers; farm laborers and farm foremen; and private household workers categories. The remaining four major categories each contained between 5 and 10 percent of the employed civilian labor force with the largest of the four, service workers, except private household, containing 9.8 percent of the total.

The largest labor force minority groups in the State, nonwhites and women, experienced significant occupational upgrading in the 1960's. For both groups there were increases in the "white-collar" occupations, and decreases in the lower skill categories. Movement into the higher skill level and higher paying categories for these groups was caused basically by the same factors, although some were more important for one group than the other; these factors were: an increased awareness of abilities and rights; elimination of employment and promotion barriers by governmental pressures and by a more generally tolerant attitude by the public; increased educational attainment; increased economic pressure on employers in certain rapidly growing industries to hire employees to meet severe manpower needs (particularly in high skill jobs); movement from farm to city, which increased the physical proximity of workers to industrial jobs; and general increases in the need for high skilled workers.

The implications of the above mentioned changes on the State and its people are numerous. If the trends noted in recent decades continue into the future, there will be a further movement from rural to urban areas, with a simultaneous change from farm-related occupations to industrial occupations. A continued strong effort by the State to expand the economy, through the auspices of the "Balance Agriculture with Industry" program and similar programs, would probably accentuate this transformation of the State from a rural, agricultural society to an urban,

industrialized society. Activities in this direction tend to bring the industrial-agricultural mix and the occupational structure of Mississippi in greater conformity with that in the rest of the nation.

The number of women in the labor force will in all probability continue to increase in the future. Numerous reasons for the trend have been offered and the major reasons are discussed at various points in the study. An increased female labor force holds several important implications for the State. First, it can be expected that there will be an increased demand for government services, such as day care centers, to allow more female labor participation. Second, there will be increased pressure to break barriers of sexual discrimination in many occupations. Third, the occupational structure and industrial development of the State can be expected to reflect the increased number of female workers. In addition, increased female labor force participation, particularly by married women, may be significant in bringing about a higher level of income for many Mississippi families.

Underutilization of the nonwhite population in the productive sector of the State's economy is an increasing problem for Mississippi. Nonwhite occupational upgrading and increased labor force participation in the future depends to a large degree upon expanded educational and job training opportunities. Ample evidence exists of the direct contribution of education to employment and productivity. The greater the education, generally speaking, the greater the chance of developing the full potential of the individual and the greater the probability that the individual will be able to accept increased responsibilities. The expanded education and training of nonwhite Mississippians in the professions, managerial arts, crafts, and other skilled jobs would provide them with the necessary tools for employment and promotion in this State, and reduce their economic incentives for leaving the State for other parts of the country. The problem cannot be solved,

however, by education and training alone. Local employment opportunities for non-whites must be improved and such improvement may be as much a function of changing social conditions as it is of changing economic conditions.

It is widely recognized that economic growth of a State is dependent upon the development and use of its natural resources, capital equipment, technology and human talents. An underutilization of any of these resources means that economic progress and industrial growth are retarded. There is an underutilization of manpower in Mississippi as evidenced by the labor force participation rate of 53 percent in the State as compared to 61 percent for the Nation. However, Mississippi public authorities could make a significant contribution to a greater utilization of human resources and thereby encourage economic and industrial growth in the State with properly designed education and training programs to meet future manpower requirements. Mississippi's future economic development will require continuing and expanded effort in the areas of general and vocational education, job market information, and non-discriminatory job opportunities. Failure to place adequate emphasis on these important factors could result in a low growth rate and high unemployment problems. Mississippi's economic and governmental leaders must become more aware of the importance of human capital development to Mississippi's future and formulate policies accordingly.

VT 017 447
EAST BATON ROUGE PARISH COOPERATIVE CAREER EDUCATION PROJECT. RESEARCH AND DEVELOPMENT PROJECT IN CAREER EDUCATION. FINAL REPORT.

LOUISIANA STATE DEPT. OF EDUCATION, BATON ROUGE.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
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IDENTIFIERS - *PUBLIC LAW 90 576

ABSTRACT - THIS 2-MONTH RESEARCH AND DEVELOPMENT PROJECT IN CAREER EDUCATION FOR KINDERGARTEN THROUGH THE POST-SECONDARY GRADES, FUNDED UNDER PART C OF PUBLIC LAW 90-576, WAS INTENDED TO MEET THE FOLLOWING GOALS AND OBJECTIVES: (1) IMMEDIATE, SPECIFIC MANPOWER NEEDS OF EAST BATON ROUGE PARISH, (2) THE VOCATIONAL-TECHNICAL CURRICULUM IN TERMS OF COURSES OFFERED AND PLACES WHERE OFFERED, (3) A BRIEF SURVEY OF AVAILABLE RESOURCES, (4) PROPOSED ROLES FOR EACH EDUCATIONAL GROUP, (5) AN INVESTIGATION OF THE DEVELOPMENT OF A COOPERATIVE CAREER EDUCATION MODEL FOR THE EAST BATON ROUGE PARISH AREA, AND (6) IDENTIFICATION AND PRODUCTION OF COOPERATION BETWEEN THE BUSINESS, INDUSTRIAL, AND EDUCATIONAL RESOURCES IN THE GREATER BATON ROUGE AREA. A SERIES OF EIGHT MEETINGS WERE HELD BY MEMBERS OF THE EAST BATON ROUGE COOPERATIVE CAREER EDUCATION COMMITTEE TO STUDY THE FEASIBILITY OF DEVELOPING A STATE MODEL IN CAREER EDUCATION. BASED ON AVAILABLE DATA, REPRESENTATIVES OF THE VARIOUS PLANNING AGENCIES AND VOCATIONAL EDUCATION ADMINISTRATORS RECOMMENDED CONTINUATION OF THE STUDY, TOGETHER WITH EIGHT IDEAS FOR PROGRAM IMPLEMENTATION NO LATER THAN SEPTEMBER 1973. CAREER DEVELOPMENT SHOULD FOCUS ON THE NEEDS OF THE LEARNER IN RELATIONSHIP TO THE MANPOWER NEEDS OF THE COMMUNITY. (AG)

VT 017 447

FINAL REPORT

Research and Development Project in Career Education

Conducted Under
Part C of Public Law 90-576

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August 31, 1972

VT017447

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EDUCATION & WELFARE
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FINAL REPORT

EAST BATON ROUGE PARISH
COOPERATIVE CAREER EDUCATION PROJECT

Research and Development Project
in Career Education

Conducted Under
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The project reported herein was performed pursuant to a grant from the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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August 31, 1972

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Time period covered: From July 1, 1972, to August 31, 1972.

Goals and objectives:

1. Immediate, specific manpower needs of East Baton Rouge Parish
2. The vocational-technical curriculum in terms of courses offered and places where offered
3. A brief survey of resources available: facilities, equipment, faculty and existing programs
4. Proposed roles for each educational group
5. To investigate the development of a Cooperative Career Education Model for the East Baton Rouge Parish Area
6. To identify and produce cooperation between the business, industrial, and educational resources in the Greater Baton Rouge Area

Statement of the Problem:

The State Department of Education, Louisiana State University, Southern University, Capitol Area Vocational School, Baton Rouge Vocational-Technical School, the East Baton Rouge Parish School Board, and various community agencies and individuals have cooperated in developing a design for a Career Education Program designed to meet the educational needs of students from kindergarten through the university level. The program is in keeping with the philosophy being espoused by the U. S. Commissioner of Education and the Louisiana State Superintendent of Education.

Career Education in East Baton Rouge Parish will begin when the child has his first contact with a school and continue to the point when the student is employed--and actually beyond that point in that follow-up studies, upgrading of skills, etc., will be done after employment. Career Education has two principal focuses: First to develop desirable attitudes about work; and second, to develop proficiency in performing work. These two objectives are long range in nature and may be accomplished only as a result of considerable planning and much diligent work. Attitude formation is the principal focus at the elementary school level; prevocational-exploratory experiences are stressed at the junior high school and early high school levels; and vocational proficiency is the objective at the high school and post-secondary levels. The entire program is based on a sound vocational guidance program and current manpower needs data. Each facet of the program will be located where the particular need can best be met--some at the universities; some at the vocational-technical schools; some in various businesses, industries, and institutions in the area; and some in the public elementary and secondary schools.

Procedures followed:

A series of eight meetings were held by the members of the East Baton Rouge Cooperative Career Education Committee to study the feasibility of developing a State Model in Career Education. These members are:

Mr. John E. O'Dowd, Jr., Assistant Superintendent
Louisiana State Department of Education

Mr. Robert J. Aertker, Superintendent
East Baton Rouge Parish School Board

Dr. Gil Browning, Assistant Superintendent
Louisiana State Department of Education

Mr. W. D. Garrett, Director
Baton Rouge Vocational-Technical School

Mr. Eugene Harris, Director
Capitol Area Vocational School

Dr. Lamar Jones, Chairman, Economics Department
Louisiana State University

Mr. Howard W. Kidd, Coordinator
East Baton Rouge Parish School Board

Miss Ruth Letten, Acting Bureau Head
Research and Data Collection
Louisiana State Department of Education

Dr. Leon Netterville, President
Southern University

Honorable Kevin P. Reilly, State Representative
68th Congressional District

Mr. Winston W. Riddick, Executive Assistant Superintendent
Louisiana State Department of Education

Mr. Tom Miller, Coordinator
Career Education

Dr. Roosevelt Steptoe, Economic Research Professor
Southern University

Chancellor Cecil Taylor
Louisiana State University

The principal investigator provided periodic reports as requested by the objectives listed in this project. See the appendix for data relating to the reports.

Much of the research time was spent organizing data that had already been initiated and filed within the State Department of Education. The information relating to job entry opportunities, labor demands, and student needs were accomplished in such a short time by the utilization of survey information originally generated by project VITAL which is a program to develop relevant vocational information. A survey form was developed to secure occupational information in addition to that from local and regional sources. Over 300 organizations furnished occupational resource materials and information out of a total of 686 sent these forms. Also over 180 establishments furnished local and regional occupational information on a survey form prepared for this purpose. A total of over 496 entry positions, including 296 in private firms and 200 classes of positions or 431 occupations under Civil Service, or a grand total of 727 entry positions in nine area parishes, were reported by establishments hiring a total of over 42,501 employees in the region surveyed.

Results; Accomplishments:

Based on available data and after much study by representatives of the various planning agencies involved during the month of July and August, it was decided to implement the following recommendations in September, 1972, and to continue the study with a view to the implementation of a more complete Career Education Program no later than September, 1973:

1. Continue development of a Kindergarten-Adult Career Education Model
2. A parish coordinator for Career Education in East Baton Rouge be appointed
3. The assignment of a liaison coordinator with the State Department of Education
4. A permanent representative committee on Career Education be established in East Baton Rouge under the leadership of a parish coordinator
5. In-service education relating to Career Education will begin with administrators, counselors, teachers, and parents
6. A Model Career Education Program in Health Services should be established
7. Respond to manpower and student needs in the occupational clusters listed: (a) Business Education and Office Occupations, and (b) Trade and Industrial Education
8. An expansion of cooperative programs for students directed toward career, guidance, placement, and follow-through

The above activities can be successful under a double concept of career development. First we should focus on the needs of the learner in relationship

to the manpower needs of the community (local, state, and national). If one considers the learner first at all grade and educational levels, step two is a natural outcome. Identification and utilization of resources is a must to promote the maximum development of human resources, facilities, and equipment.

Evaluation:

There was no third-party evaluation on this small grant; however, process evaluation will continue as the project moves from exploratory to an established ongoing program.

APPENDIX

COOPERATIVE CAREER EDUCATION COMMITTEE MEETINGS

1. Steering Committee - June 28, 1972 - 12 participants
   7:30 A.M. to 10:00 A.M. Man Hours 30.00

2. Ad Hoc Committee - July 5, 1972 - 6 participants
   7:45 A.M. to 9:15 A.M. Man Hours 9.00

3. Ad Hoc Committee - July 12, 1972 - 7 participants
   7:45 A.M. to 9:15 A.M. Man Hours 10.50

4. Ad Hoc Committee - July 28, 1972 - 6 participants
   7:40 A.M. to 9:00 A.M. Man Hours 7.20

5. Steering and Ad Hoc Committees - August 1, 1972 - 12 participants
   7:30 A.M. to 10:15 A.M. Man Hours 33.00

6. Steering and Ad Hoc Committees - August 9, 1972 - 9 participants
   7:30 A.M. to 10:15 A.M. Man Hours 24.25

7. Ad Hoc Committee - August 16, 1972 - 7 participants
   7:30 A.M. to 9:30 A.M. Man Hours 14.00

8. Steering and Ad Hoc Committees - August 29, 1972 - 13 participants
   1:30 P.M. to 3:30 P.M. Man Hours 26.00

TOTAL MAN HOURS 153.95

TOTAL MAN HOURS 153.95

TOTAL WORKING DAYS 19.24 (8 hours)

CONTRIBUTING ROLES OF MEMBERS
OF
EAST BATON ROUGE COOPERATIVE CAREER EDUCATION PROGRAM

UNIVERSITIES

To provide and interpret existing occupational research data related to the region and State
Curriculum assessment and materials
Resource inventory of university personnel
Review of curriculum requirements for program planning
Review present counselor and teacher education programs, and make recommendations for improvement
Recommend and furnish facilities, equipment, and instructional personnel
Supply consultants

VOCATIONAL-TECHNICAL SCHOOLS

Cooperation in planning and implementing expansion of guidance, instructional programs
Coordination of placement in suitable training and employment situations
Recommend and provide facilities, equipment, curriculum materials and instructional personnel
Supply consultants
Curriculum Assessment
Assistance in enrollee selection

STATE DEPARTMENT OF EDUCATION

Consultant Services
Conceptual framework for curriculum development
General leadership in development, implementation, and operation of career education and guidance programs
Publicity, communication, and public relations
Assistance in proposing, preparing, submitting, and getting budgets approved for programs
Recommend and provide facilities, equipment and instructional personnel
Provide personnel training and personnel relations
Supply consultants
Coordination of programs
Planning, coordinating, and implementation of occupational information surveys--collection, analysis and dissimination of data for career guidance and education on a State-wide basis

EAST BATON ROUGE PARISH SCHOOL BOARD

Provide facilities, equipment, and instructional personnel for the Greater Baton Rouge Area
In-service training programs in career education and guidance
Transportation
Course offerings
Coordination of programs
Diagnostic and follow-up studies
Community relations
Coordinates placement in training programs
Presentation of a health oriented curriculum
Development of new systems for enrollee selection
Implements local and regional occupational information surveys--coordinated by State Department

MANPOWER NEEDS
COOPERATIVE PARISH EDUCATION
EAST BATON ROUGE PARISH

Courses	Enrollee's Demand: Waiting Lists	Enrollee's Demand: Post High School Educational Survey Sheet (May 1972)	Enrollee's Demand: Post School Survey of 1969 Graduates	Manpower Needs: La. State Plan Adm. of Voc. Educ., 1972	Manpower Needs: VITAL Career Information Report, June 30, 1972	Manpower Needs: Employment Security Communication on Entry/Demand Occupations	Manpower Needs: Manpower Requirement Fiscal Year 1973	Manpower Needs: DAR Report Vocational Education in Louisiana	Manpower Needs: Sample of Local Want Ads	Manpower Supply: Vocational-Technical School	Manpower Supply: East Baton Rouge Parish Schools	Manpower Supply: Manpower Programs	Manpower 5 Year Total
Office Occupations	[illegible]	[illegible]	[illegible]	[illegible]	Entry Demand	[illegible]	[illegible]	[illegible]	X		[illegible]	[illegible]	[illegible]
Bookkeeping I		[illegible]			Demand				X				
Bookkeeping II				[illegible]	X	X	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]
Business Machines (Key Punch)		[illegible]		[illegible]	X	X	[illegible]						[illegible]
Clerical Practice													
Shorthand I									X				
Shorthand II		[illegible]		[illegible]	X	X	[illegible]			[illegible]			[illegible]
Typing													
Typing									X			[illegible]	
[illegible] Key Punch													
[illegible]													
[illegible]													
[illegible]													
[illegible]													
Specialty													

1698

1699

MANPOWER NEEDS
COOPERATIVE [illegible] EDUCATION
EAST BATON ROUGE PARISH

Courses	Enrollee's Demand: Waiting Lists	Enrollee's Demand: Post High School Educational Survey Sheet May 1972	Enrollee's Demand: Post Sem. 1 Survey of Last Graduates	Manpower Needs: La. State Plan Adm. of Voc. Educ., 1972	Manpower Needs: [illegible] Information Report, June 30, 1972	Manpower Needs: Employment Security Commission on Entry/Demand Occupations	Manpower Needs: Manpower Requirement Annual Year 1973	Manpower Needs: [illegible] Report Vocational Education in Louisiana	Manpower Needs: Sample of Local Want Ads	Manpower Supply: [illegible]	Manpower Supply: East Baton Rouge Parish Schools	Manpower Supply: Manpower Programs	Manpower 5 Year Totals
VOCATIONAL-TECHNICAL					Entry Demand	Demand							
Auto-Mechanics	72	[illegible]	3	220*	X	X	249*	[illegible]	X[1]	[illegible]	51		280
Electronics	67	[illegible]		220	X	X	251		X	7	32		195
Horticulture											33		155
Masonry		[illegible]		12*	X	X							
Power Mechanics	[illegible]	[illegible]		100*	X	X	[illegible]	[illegible]	X		52		260
Airconditioning - Refrigeration	10*	[illegible]							X	[illegible]	55		315
Welding (2000 state-wide)	[illegible]	[illegible]		7[illegible]	X	X	78		X	30	43		[illegible]
Not Engagement 1626 Stated													
Attendants - Auto Service 402													
Independent garage owner indicate a large demand													
State figures for welders indicate a large demand													
Indicates a demand for this occupational specialty													

WANTED: INFORMATION FROM FORMER STUDENTS
REWARD: BETTER HIGH SCHOOLS

Total No. of Sheets sent out- 3500
Total No. of Sheets answered- 1313
Percent -- 38

EAST BATON ROUGE PARISH HIGH SCHOOLS

POST SCHOOL SURVEY

14 Senior High Schools

Name: Mr. / Mrs.* / Miss _____ Permanent Mailing Address _____

*Married Women _____ (Write maiden name here)

City _____ State _____ Zip Code _____

Phone _____ (If no phone, write "none")

Date _____ (Date this is filled in)

Present marital status: 1 ☐ Single 57% 2 ☐ Engaged 10% 3 ☐ Married 30% 4 ☐ Other (Explain) 3%

DIRECTIONS: Please answer the following questions carefully. Most of the questions can be answered by placing a check "X" in the appropriate square. On some the answers will have to be written. These questions can be answered in one or two words or a few short sentences. Please write plainly. Please try to answer each question.

1. What is your EMPLOYMENT status? (Check "X" one)

- 36% ☐ Employed full-time (30 or more hours per week)
- 23% ☐ Employed part-time (less than 30 hours per week)
- 8% ☐ Doing housework at home, not otherwise employed, and not seeking outside employment
- 7% ☐ Unemployed, and seeking work
- 14% ☐ Unemployed, and not seeking work
- 1% ☐ Taking compulsory military training (Under Selective Service Act)
- 4% ☐ Serving a regular enlistment in the armed forces of the U.S.
- 7% ☐ Other (Explain) _____

Years Employed:

☐ One Year 39% ☐ Two Years 33% ☐ Three Years 28%

2. What is your EDUCATIONAL status? (Check "X" one)

- 14% ☐ Receiving training on the job, but not going to school otherwise
- 5% ☐ Receiving training in the armed services but not going to school otherwise
- 20% ☐ Not going to school or receiving training
- 48% ☐ Going to college full-time
- 7% ☐ Going to college part-time
- 1% ☐ Taking a home-study (correspondence) course
- 1% ☐ Going to Vocational-Technical School full-time
- 2% ☐ Going to Vocational-Technical School part-time
- 2% ☐ Other

Level of training currently enrolled in:

19% ☐ 1st year ☐ 2nd year 35%
31% ☐ 3rd year ☐ 4th year 15%

3. What is your grade average in this educational or training program?

☐ Above Average 49% ☐ Average 49%
☐ Below Average 2%

1790

4. What did you plan to do when you completed high school? (First and second choice)

1. 62% Same (Compare with Items #1 and #2)

2. 38% Different

5. Did your present employer

☐ Require previous training? (Describe) 226

☐ Provide on-the-job training? (Describe) 305

☐ Other (Describe) 211

6. What are your present average earnings before deductions? $ 432.21

☐ Weekly ☒ Monthly ☐ Yearly

7. Are you employed by a member of your family, or by a family friend?

11% ☐ Yes 89% ☐ No

8. Through what source did you learn about the "opening" that led to your present job? (Check "x" one)

38% ☐ Member of your family, or a friend
12% ☐ School authorities
6% ☐ Private employment agency (to whom you paid a fee)
6% ☐ Public employment agency (such as State Employment Service)
22% ☐ Personal application while looking for a job
4% ☐ Classified advertisement in paper
12% ☐ Other (Explain)

9. How do you feel about your present type of work?

40% ☐ Very satisfied with it
34% ☐ Fairly satisfied with it
17% ☐ Neither satisfied nor dissatisfied
5% ☐ Rather dissatisfied with it
4% ☐ Very dissatisfied with it

10. Do you plan to remain on this job for at least another year?

64% ☐ Yes
8% ☐ No. I would like to change jobs, but continue to do the same type of work
10% ☐ No. I would like to get a job in the same field, but at a more advanced level
18% ☐ No. I would like to get a job in a different field.

11. To what degree is your present job related to your studies in HIGH SCHOOL?

17% ☐ Closely related
30% ☐ Somewhat related
35% ☐ No relationship
17% ☐ Can't rate this

12. To what degree is your present job related to your studies in a SCHOOL AFTER HIGH SCHOOL?

21% ☐ Closely related
21% ☐ Somewhat related
32% ☐ No relationship
26% ☐ Can't rate this

13. List the training programs, vocational-technical schools, colleges, etc., in which you have been enrolled since you completed high school.

I. College & Universities 37
II. Voc.-Tech. Schools 16
III. Business Colleges 9
IV. Beauty Schools 7
V. Health Training 6
VI Other 14

14. What extra-curricular activities and/or clubs would you suggest for high school students today?

I. Activity Club 25
II. Career Club 15
III. Service Club 9
IV. Honor Club 4
V. Social Club 4

15. Have any of your hobbies (past-times) had a relation to your vocational choice?

☐ Yes (Explain) 39%

☐ No 61%

16. What REGULAR jobs have you held since you left high school, including your present job, if any?

NOTE: By regular, we mean jobs which were half-time or more, and which were not just temporary such as mowing grass, etc. Omit jobs held while still in high school.
Fill in the following information for each regular job you have held since you left high school. Be sure to include your first job held after leaving high school. If you have held more than six jobs, note those at which you worked the longest time. Be as complete as possible. Include service in the armed forces.
START WITH YOUR PRESENT JOB AND WORK BACK.

Name and Address of Employer	Kind of Business	Name of job or kind of work	Dates (How long)	Full- or Part-time	Reason(s) for Leaving
Example: Glover Stores Co. 333 S. Main St. Newton, Mass.	Retail Grocery	Sales Clerk	From: Mar. 1963 To: Sept. 1964	☐ Full-time ☐ Part-time	Offered Better Job
1. No. of students with jobs		72%	From: To:	☐ Full-time ☐ Part-time	
2. No. of students without jobs		28%			
3. Average total of jobs held by working students only		1.91%	From: To:	☐ Full-time ☐ Part-time	
			From: To:	☐ Full-time ☐ Part-time	
			From: To:	☐ Full-time ☐ Part-time	
			From: To:	☐ Full-time ☐ Part-time	
			From: To:	☐ Full-time ☐ Part-time	

NOTE: For questions 17 through 20. By "Occupational Life" is meant everything to do with getting jobs, doing the work required on those jobs, deciding and planning for a life's work, and actually carrying out the plans for life's work.

17. From what sources chiefly did you seek advice about your occupational life before leaving school? (Check "X" those which have been MOST helpful to you)

3%	☐ No one
3%	☐ School teacher
5%	☐ School counselor
6%	☐ A school attended since leaving high school
-	☐ YMCA, YWCA, and similar sources
1%	☐ Public employment agency
1%	☐ Private employment agency
5%	☐ Parents, relatives, or adult friends of the family
11%	☐ Workers on jobs you are interested in
4%	☐ Employer or supervisor
8%	☐ Immediate personal friend
3%	☐ Other

18. Which subject that you took in high school has been of most value to you in your occupational life since you left high school? (1) English--14 schools; (2) Math--12 schools; (3) Typing--11 schools

(If no subject has been of value to you, write "none" here.)

19. What subjects or kinds of education which you DID NOT HAVE do you now think would have helped you in your occupational life since leaving school?

I. Business

II. Mathematics

III. Vocational Training

IV. Psychology -- Human Relations

20. If there are any suggestions you care to make which might help the school be of greater service to you or the young people now in the school, please write them here.

I. Vocational Courses

II. Guidance

III. Better Teachers

IV. Meeting Student Needs (Personal)

V. More Courses

VI. Better Libraries

VII. Teacher Visitation

VIII. Teaching How to Study

NOTE: Will you kindly check over the questions to make sure that you have indicated or written an answer for each question. Be sure that your name, address, phone number, and the date this blank was filled in are written clearly on the top of the first page.

PLEASE RETURN THIS INVENTORY FORM IN THE ENCLOSED ENVELOPE AT ONCE.
THANK YOU FOR HELPING US TO HELP OTHERS.

1703

72/2/47

EAST BATON ROUGE PARISH HIGH SCHOOLS
POST SCHOOL SURVEY

Question Number 16

OCCUPATIONS	PERCENTAGES
Professional, Technical & Managerial	
Job I	9.44
Job II	3.55
Total	12.99
Clerical and Sales	
Job I	32.02
Job II	22.57
Total	54.59
Service Occupations	
Job I	10.84
Job II	8.24
Total	19.08
Agricultural	
Job I	.32
Job II	.12
Total	.44
Processing	
Job I	.63
Job II	.76
Total	1.39
Machine Trades	
Job I	1.14
Job II	.50
Total	1.64
Bench Work	
Job I	1.14
Job II	.63
Total.	1.77
Structural Work	
Job I	1.77
Job II	1.46
Total	3.23
Miscellaneous	
Job I	2.28
Job II	2.53
Total	4.81

EAST BATON ROUGE PARISH JUNIOR HIGH SCHOOLS
POST SCHOOL SURVEY

Question Numbers 1 & 2

OCCUPATIONS	PERCENTAGES
Professional, Technical & Managerial	
Father	21.04
Mother	8.23
Total	29.27
Clerical and Sales	
Father	7.52
Mother	14.40
Total	21.92
Service Occupations	
Father	8.96
Mother	11.02
Total	19.98
Agricultural	
Father	.38
Mother	.02
Total	.40
Processing	
Father	3.67
Mother	.10
Total	3.77
Machine Trades	
Father	3.52
Mother	-
Total	3.52
Bench Work	
Father	2.29
Mother	-
Total	2.29
Structural Work	
Father	11.25
Mother	-
Total	11.25
Miscellaneous	
Father	6.27
Mother	1.28
Total	7.55

Number sheets sent out 3,964
Number sheets answered 2,876
Percentage 72.55%

EAST BATON ROUGE PARISH JUNIOR HIGH SCHOOLS
POST SCHOOL SURVEY

FAMILY INFORMATION

3. List your father's highest grade completed — 10.51 average

4. List your mother's highest grade completed — 10.79 average

5. With whom do you live?

49% Mother	2% Stepfather
40% Father	2% Guardian
1% Stepmother	6% Spouse

EDUCATION INFORMATION

6. What is your EDUCATIONAL status?

78% Going to high school full-time
11% Going to high school part-time
4% Going to college full-time
1% Going to college part-time
1% Receiving training on the job, but not going to school otherwise
1% Receiving training in the armed services but not going to school otherwise
1% Not going to school or receiving training
2% Other

7. What is or was your grade average in high school?
33% above average 60% average 7% below average

Since leaving junior high school your grades have:
39% improved 45% stayed the same 16% fallen

8. How do you feel about your preparation for senior high school?
29% very satisfied with it
43% fairly satisfied with it
18% neither satisfied nor dissatisfied
7% rather dissatisfied with it
3% very dissatisfied with it

9. What subjects or kinds of education which you DID NOT HAVE do you now think would have helped you in your life since leaving junior high school?

Top 5 subjects by priority		Frequency Totals	
I.	Business Courses 10	I	Business Courses 19
II.	Business Courses 5	II	Math Courses 17
III.	Math Courses 5	III	Voc.-Tech. Classes 20
IV.	Voc.-Tech. Courses 4	IV	Foreign Languages 6
V.	Voc.-Tech. Courses 4	V	Science 7

10. If there are any suggestions you care to make which might help the school be of greater service to you or the young people now in the school, please write them here.

Top 5 suggestions by priority		Frequency Totals	
I.	Teacher Improvement 7	I.	Offer More Courses
II.	Teacher Improvement 4	II.	Teacher Improvement
III.	Course Offerings 9	III.	Better Principal-Teacher-Student relationships
IV.	Course Offerings 7	IV.	More guidance--counseling
V.	Course Offerings 7	V.	Smaller Classes

11. Which two junior high school courses were most helpful in preparing you for high school?

Top 5 courses by priority			Frequency Totals	
I.	English	10	I.	Math & Algebra 23
II.	Math	10	II.	Social Studies 21
III.	Science	12	III.	English 19
IV.	Social Studies	11	IV.	Science 18
V.	Social Studies	8	V.	Physical Ed. 6

12. Were there enough electives on the junior high level?
53% Yes 47% No

13. What electives would you like to see added at the junior high level?

Top 5 electives by priority			Frequency Totals	
I.	Business Courses	9	I.	Voc.-Tech. Courses 33
II.	Voc.-Tech. Courses	11	II.	Business Courses 19
III.	Business Courses	6	III.	Foreign Languages 13
IV.	Voc.-Tech. Courses	8	IV.	Art 7
V.	Voc.-Tech. Courses	5	V.	Social Studies 7

14. Did the counselor assist you at any time during your junior high years?
43% Yes 57% No

15. When did you see the counselor or use the guidance services?
10% regularly 49% seldom 41% never

16. Now that you're in high school, what kind of assistance could the counselors have given you that would have made the transition from junior high to senior high easier (better)?

Top 5 by priority			Frequency Totals	
I.	Subject selection	11	I.	Subject selection 34
II.	Subject selection	8	II.	Social-Personal Guidance 16
III.	Subject selection	7	III.	Study Guidance 9
IV.	Study Guidance	7	IV.	High School Orientation 9
V.	Subject selection	5	V.	Vocational Guidance 5

17. Were efforts made by the school to assist you with any special (individual) problems you had?

40% Yes 60% No

18. Were enough provisions made for social activities (clubs, activities, organizations)?

63% Yes 37% No

What activities were missing?

Top 5 activities by priority		Frequency Totals	
I. Clubs	10	I. Athletics	21
II. Athletics	6	II. Clubs	20
III. Clubs	8	III. Socials	13
IV. Athletics	6	IV. Cheerleaders	5
V. Athletics	5	V. None	5

19. What one quality in junior high teachers did you like most?

Top 5 qualities by priority		Frequency Totals	
I. Understanding	8	I. Personality	18
II. Helpful	6	II. Understanding	14
III. Teaching Ability	6	III. Teaching Ability & Methods	9
IV. Teaching Ability	7	IV. Personal Interest	20
V. Personality	8	V. Fairness	5

Least?

Top 5 by priority		Frequency Totals	
I. No Teaching Ability	6	I. No Personal Interest	10
II. No Personality	6	II. No Personality	8
III. No Teaching Ability & No respect for students	6	III. Too Strict	7
IV. No Teaching Ability	7	IV. Unfair	7
V. No Personality	4	V. No respect for students	7

20. What is your EMPLOYMENT status?

15% Regular employment full-time (30 or more hours per week)
24% Regular employment part-time (less than 20 hours per week)
36% Unemployed, and seeking work
12% Unemployed and NOT seeking work
1% Taking ROTC
1% Serving a regular enlistment in the armed forces of the U. S.
3% Serving in a voluntary program such as the Job Corps
6% Irregular employment (babysitting, mowing lawns, etc.)
2% Other

21. What do you plan to do when you graduate from high school?

Top 5 by priority			Frequency Totals	
I.	College	16	I. Job	20
II.	Job	15	II. College	19
III.	Voc. School	10	III. Voc. School	19
IV.	Voc. School	5	IV. Armed Forces	11
V.	Marriage	5	V. Marriage	10
	Armed Forces	5		

22. If you are employed, what are your present average earnings before deductions?

161.71 Monthly - Average

23. Are you employed by a member of your family or by a friend of your family?

20% Yes 80% No

24. Through what source did you learn about the "opening" that led to your present job?

57% Member of your family, or a friend
15% School
- Private employment agency (to whom you paid a fee)
1% Public employment agency (such as State Employment Service)
16% Personal application while looking for a job
4% Classified advertisement in paper
7% Other

25. To what degree is your present job related to your studies in SCHOOL?

14% Closely related
17% Somewhat related
46% No relationship
23% Can't rate this

26. What do you expect is going to be your regular occupation?

Top 5 by priority			Frequency Totals	
I.	Undecided	14	I. Secretarial	20
II.	Secretary	8	II. Undecided	18
III.	Teacher	6	III. Teacher	14
IV.	Secretary	4	IV. Doctor	8
V.	Lawyer	3	V. Nursing	7
	Medical	3		

Compare with Item #21	
Number Same	65%
Number Different	35%

27. When did you decide definitely on what you now expect is going to be your regular occupation?
 39% Still undecided
 11% Before entering senior high school
 42% During senior high school
 2% Since leaving high school and prior to present job
 3% While on present job
 1% While attending post high school educational institute
 3% Other

28. Have any of your hobbies had a relation to your vocational choice?
 33% Yes
 67% No

29. From what sources chiefly have you sought advice about your career plans?
 11% No one
 2% Principal
 18% Counselor
 13% Teacher
 1% A school attended since leaving high school
 3% Clubs and organizations
 1% Public employment agency
 - Private employment agency
 27% Parents, relatives, or adult friends of the family
 9% Workers on jobs you are interested in
 3% Employer or supervisor
 9% Immediate personal friend
 1% Religious Counselor
 2% Other

30. What REGULAR jobs have you held since you left junior high school, including present job, if any?

1. Total number of students working 54%
2. Total number of students not working 46%
3. Average number of jobs of students working only 1.5%
4. Top 4 or 5 jobs

Top 5 jobs by priority			Frequency Totals		
I.	Sales Clerk	13	I.	Sales Clerk	18
II.	Office Work	7	II.	Office Work	15
III.	Sales Clerk	3	III.	Service Station Attendant	11
	Office Work	3	IV.	Grocery Store	11
	Service Station Attendant	3	V.	Restaurant	8
IV.	Grocery Store	5			
V.	Service Station Attendant	6			

POST-HIGH SCHOOL EDUCATIONAL SURVEY SHEET

East Baton Rouge Parish School Board will offer vocational and technical courses at the post-high school level. Would you please check the courses that would interest you either in day school or night school.

PRESENT PROJECTED COURSES

336 Air-Conditioning & Refrigeration
309 Auto Body
571 Auto Mechanics
386 Commercial Art
373 Drafting
452 Electricity-Electronics
264 Power Mechanics
504 Welding
780 Typewriting
567 Bookkeeping
476 Shorthand
588 Office Machines
828 Keypunch Operations
279 Printing

FUTURE PROJECTED COURSES

665 Data Processing
484 Practical Nursing
280 Cosmotology
442 Child Care Management
270 Food Service
150 Alterations
359 Masonry & Brick Laying
467 Dental Assistant
638 Medical Assistant

Do you know of others (adults) who be interested in any of the above courses?

976 Yes No 1327

Administered May, 1972

BUDGET SUMMARY

SALARY		
Principal Investigator	$ 2,913.17	
Part-time Help	800.00	
		3,713.37
TRAVEL EXPENSES		
Monroe, Louisiana (La. Principal's Association) Tom Miller, Principal Investigator	58.00	
Dallas, Texas (Skyline Career Center) Tom Miller, Principal Investigator Howard Kidd, Sr. High School Coordinator Dr. Lorin Smiley, Assistant Superintendent	393.87	
Atlanta, Georgia (Cobb County) Tom Miller, Principal Investigator A. B. Sibley, Guidance Supervisor Howard Kidd, Sr. High School Coordinator	292.40	
New Orleans, Louisiana (Allied Health Careers) Tom Miller, Principal Investigator	20.65	
Travel Expenses for July and August (EBR Parish) Tom Miller, Principal Investigator	46.46	
		811.38
MATERIALS	24.25	
		24.25
TOTAL PROJECT EXPENSES		$4,549.00

Proposed EBR Program to Coordinate Vocational Trainin

By ART ADAMS
Advocate Educator Reporter

An effort is underway in East Baton Rouge Parish to coordinate the vocational training offerings of several state and local educational institutions.

If successful the cooperative program could point the way for career education in Louisiana for years to come.

The program in "cooperative career education," as it is known at this point in the planning, involves the State Department of Education, the East Baton Rouge Parish school system, LSU, Southern University, the Baton Rouge Vocational-Technical School and the Capitol Area Vocational School.

As explained by Winston Riddick, executive assistant to state Education Supt. Louis Michot, the program ignores the still-unsettled debate on the issue of state versus local jurisdiction over projected increases in spending for vocational-technical training.

"We're not interested in that," Riddick said. "We just want to make sure that we provide the best possible training in vocational-technical areas as soon as possible and with a minimum of duplication."

Reddick said the concept is in line with the educational objectives outlined by Michot before the Louisiana School Boards Association this year.

Efforts Pooled

Representatives of the various educational agencies and institutions in the parish met shortly after Michot took office and were persuaded to cooperate in pooling their resources.

Among those persuaded was Howard W. Kidd, high school coordinator for East Baton Rouge Parish schools, who was instrumental two years ago in getting the parish school board to spend money from its construction fund for vocational-technical shops in the high schools.

East Baton Rouge school officials have also been trying for some time to get state approval for 13th and 14th grades for vocational-technical training. Kidd and other officials were lobbying for it in the Legislature this year, in fact, when they were approached about the cooperative program.

"I was skeptical at first," Kidd admits, "but Mr. Reddick convinced me and Supt. (Robert) Aertker gave us the authority to cooperate."

Thomas Miller, guidance supervisor for the parish schools, was "loaned" to the State Department of Education to direct the pilot program. Miller has extensive experience in gathering occupational statistics, having initiated the VITAL Career Information Center, which surveys employers in the nine-parish Greater Baton Rouge area and informs students of occupational opportunities.

Committee Named

A subcommittee of the original agency representatives was organized to make recommendations for proposed role of the cooperating agencies. The membership of the committee, in addition to Kidd and Miller, includes John O'Dowd, assistant state superintendent for career education who serves as chairman; Dr. Lamar Jones, head of the LSU economics department; Dr. Roosevelt Stepto, professor of economic research at Southern University; Eugene Harris, director of the Capital Area Trade School; Miss Ruth A. Letten, acting director of the Bureau of Research and Data Collection in the State Department of Education; and state Rep. Kevin P. Reilly of Baton Rouge.

For the past several weeks, Miller has been compiling what amounts to an inventory of present vocational-technical courses, facilities, equipment and instructors in the cooperating institutions.

This information will be compared with manpower needs as stated by business and industry through the VITAL Center and other manpower surveys.

The preferences of prospective students as expressed in various surveys and questionnaires will also be taken into account.

Hopefully, the resulting information will help the committee make rational decisions having some relationship to the real occupational needs of both students and employers.

Needs Considered

For example, if the figures indicate a need for welders that cannot be met by the two state-operated vocational-technical schools in Baton Rouge, the East Baton Rouge Parish schools might offer additional courses in the afternoon and evening for high school graduates.

Kidd said the program offers an opportunity for fuller utilization of the parish school system's vocational-technical shops, which now are used only during the regular school hours.

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VT 017 448
DUCARD, WILLIAM T.
A STUDY TO DETERMINE THE EMPLOYMENT OPPORTUNITIES OF ASSOCIATE DEGREE MECHANICAL ENGINEERING TECHNICIANS IN THE MEMPHIS AND MID-SOUTH AREA.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - AUG72 45P. M.S. THESIS, MEMPHIS STATE UNIVERSITY

DESCRIPTORS - INFORMATION NEEDS; TABLES (DATA); *MASTERS THESES; *ENGINEERING TECHNICIANS; MECHANICAL DESIGN TECHNICIANS; *EMPLOYMENT OPPORTUNITIES; *SOUTHERN STATES; MANPOWER NEEDS; OCCUPATIONAL INFORMATION; MANPOWER DEVELOPMENT; EMPLOYMENT PROJECTIONS; *ASSOCIATE DEGREES; TECHNICAL EDUCATION; VOCATIONAL EDUCATION; VOCATIONAL DEVELOPMENT
IDENTIFIERS - *MEMPHIS

ABSTRACT - AS PART OF A MASTER'S DEGREE PROGRAM, A 15-QUESTION SURVEY INSTRUMENT WAS DEVELOPED AND UTILIZED IN ORDER TO ANSWER FOUR BASIC QUESTIONS CONCERNING: (1) EMPLOYMENT OPPORTUNITIES OF ASSOCIATE DEGREE MECHANICAL ENGINEERING TECHNICIANS IN THE MEMPHIS AND MID-SOUTH AREA, (2) EXPECTED JOB QUALIFICATIONS, (3) SALARY RANGES, AND (4) OBSTACLES TO EMPLOYMENT SUCH AS UNION MEMBERSHIP AND APPRENTICESHIP REQUIREMENTS. APPROXIMATELY 45 OPENINGS EXIST NOW AND THE 5-YEAR PROJECTED NEED IS FOR 450 TECHNICIANS IN MECHANICAL ENGINEERING, INDICATING THAT EMPLOYMENT OPPORTUNITIES ARE EXCELLENT. SALARIES RANGED FROM $400 TO $2,000 PER MONTH, AVERAGING FROM $577 TO $851 PER MONTH. MINIMAL OBSTACLES TO EMPLOYMENT ARE FORESEEN. IT WAS RECOMMENDED THAT: (1) THE STATE TECHNICAL INSTITUTE AT MEMPHIS CONTINUE TO OFFER ITS MECHANICAL ENGINEERING TECHNOLOGY CURRICULUM, AND (2) THE STATE TECHNICAL INSTITUTE EXPAND ITS CURRICULUM OFFERINGS TO INCLUDE A "PRODUCTION OPTION" IN MECHANICAL ENGINEERING OR AN INDUSTRIAL ENGINEERING TECHNOLOGY CURRICULUM. A LITERATURE REVIEW, A PILOT STUDY, AND RESPONSES FROM 57 OF THE 100 INDUSTRIES WHICH WERE MAILED THE SURVEY QUESTIONNAIRE WERE USED TO COLLECT DATA, WHICH ARE PRESENTED BY MEANS OF VARIOUS TABLES. (AG)

VT 017 448

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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A STUDY TO DETERMINE THE EMPLOYMENT OPPORTUNITIES OF ASSOCIATE DEGREE MECHANICAL ENGINEERING TECHNICIANS IN THE MEMPHIS AND MID-SOUTH AREA

BY

WILLIAM T. DUGARD

A Research Report Submitted in Partial
Fulfillment of the Requirements for the Degree
of
Master of Science
in Technical Education

Approved:

Committee Chairman

Committee Member

Committee Member

Memphis State University
Memphis, Tennessee

August 1972

VT017448

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INTRODUCTION

During the last thirty years the advances made in the field of technology have been tremendous. These extremely rapid advances have created a need for technicians as engineers concentrated their efforts on more theoretical aspects of technology. This need for technicians is pointed out in the Department of Labor's book, Criteria For Technical Education:

> The explosion of new scientific knowledge has caused changes in education so that the recently graduated scientist or engineer often has had limited laboratory experience and functions more as a theoretical, diagnostic, interpretive, creative or administrative professional than in the past. He must delegate much of his scientific work to other skilled members of the scientific team. Thus, a serious shortage in trained manpower capable of giving the technical laboratory or clinical service formerly performed by the engineer or medical professional has developed. The number of new technicians of all kinds needed each year is estimated to be at least 200,000, and the needs for new kinds of technicians and for upgrading or updating employed technicians of all kinds will evidently continue to increase. (Criteria for Technical Education, 1968:2)

In order to meet the demand for technicians, federal, state and local governments have funded the establishment of vocational schools and technical institutes. These vocational schools and technical institutes were established and their curricula designed to satisfy the needs as projected by national, regional and local forecasts. Unfortunately, these forecasts have several shortcomings as stated by the Department of Labor:

> Several data gaps become apparent in analyzing technician manpower requirements and supply. These gaps or problem areas can be grouped in the following subject areas:
> The identification of the reasons for specific utilization patterns by industry.
> The need for greater occupation detail.
> The relationship between training and entry jobs.

Identification of all methods of qualifying for entry jobs. The need for statistics on occupational transfers. (Technical Manpower, 1966-80, 1970:4)

In view of the fact that the curricula of technical institutes were founded on data with shortcomings and that the technological field has continued to grow and change, it may be that technicians are being produced with skills not required and lacking skills required by industry in the area of the producing school. For the reasons stated, periodic reviews of area skill requirements are appropriate.

The State Technical Institute at Memphis is now in its fourth year and an in depth survey of the occupational opportunities in the Memphis and Mid-South area is needed to reaffirm the validity of the institute's curricula and to point out areas requiring adjustment. This survey is especially needed for the Mechanical Engineering Technology as it is a broad and rapidly changing field encompassing energy conversion, machine and tool design, and production.

Problem Statement

The problems of this investigation were to determine (1) the employment opportunities of associate degree mechanical engineering technicians in the Memphis and Mid-South area, (2) the qualifications expected of these associate degree mechanical engineering technicians, (3) the salary range that can be expected, and (4) obstacles to employment such as union requirements.

Objectives

The specific objectives of this study were as follows:

1. Conduction of a review of literature concerning the occupational opportunities for mechanical engineering technicians.

2. Construction of a questionnaire to be used as the data

collection instrument in this investigation.

3. To analyze the collected data reporting totals, means, and percentages where applicable.

4. To make recommendations as to the curriculum that should be offered by Mid-South educational institutions to the students in Mechanical Engineering Technology.

Limitations

The specific limits of this investigation were as follows:

1. The industries used in this study were located no more than eighty miles from Memphis, Tennessee.

2. The broad classification Mechanical Engineering will be restricted to the three primary types of Mechanical Technology which are Energy Conversion Technology, Machine and Tool Design Technology, and Production Technology as defined in the Technical Education Yearbook 1967-68, (Prakken, 1967:108).

Procedure

A thorough review of literature was made in order to utilize the efforts of other individuals and groups in obtaining the objectives of this investigation.

The questionnaire was utilized to determine:

1. The occupational opportunities of mechanical engineering technicians in the Memphis and Mid-South area.

2. The particular types of mechanical engineering technicians in demand in the Memphis and Mid-South area.

3. The salary range offered mechanical engineering technicians.

4. The obstacles to employment for mechanical engineering technicians such as labor union requirements for apprenticeship.

A pilot study was conducted using three members of the State Technical Institute at Memphis' Mechanical Engineering Technology faculty and the members of the State Technical Institute at Memphis' Mechanical Engineering Technology Advisory Committee.

The questionnaire along with a cover letter (Appendix C) and a return addressed, stamped envelope was mailed to one hundred (100) mechanical technology oriented industries selected at random from Memphis/Mid-South Manufacturers.

The returned questionnaires were analyzed in the following manner:

1. The number of mechanical engineering technicians employed by the polled industries is reported.

2. The percentage employed in the various categories of Mechanical Engineering Technology is tabulated.

3. The number of job opportunities available immediately is tabulated.

4. The projected mechanical engineering technician need by local industry is tabulated.

5. The percentage of companies polled wherein union or company rules require service at the apprentice level before an employee can be classified and paid at the technician level is reported.

6. The recruiting policies of the companies polled are reported.

7. The above listed items were used to recommend that the Mechanical Engineering Technology at the State Technical Institute not be changed at this time and that an Industrial Engineering Technology curriculum be offered. (Appendix E) The Industrial Engineering Technology was proposed in lieu of a production option Mechanical Engineering Technology as requested by the institute's administration.

ANALYSIS OF DATA

Description of Industries Polled

Table 1 indicates the sizes of the industries polled. This table was used to break the companies into size groups and the size group code used in Memphis/South Manufacturers assigned.

Table 1 reveals that companies of all sizes were polled in this investigation and that there was no significant response pattern as related to size. One item of note is the high percentage of industries having 1000 or more employees that responded. This high percentage of the larger industries created a condition wherein the returned questionnaires covered an estimated 63.4% of the employee positions of the industries polled.

Table 1

SIZES OF POLLED INDUSTRIES

Size Code	Size Description	No. Polled	No. Responders	%
A	Fewer than 10 employees	1	1	100%
B	10 to 24 employees	5	4	80%
C	25 to 49 employee's	6	5	83%
D	50 to 99 employees	26	12	46%
E	100 to 249 employees	25	17	65%
F	250 to 499 employees	18	10	56%
G	500 to 999 employees	11	7	63%
H	1000 or more employees	7	5	71%

Table 2 indicates the estimated size of the responding industries and the actual number of employees reported by the individual responding industries. It should be noted that the total size of responding industries which was estimated from Memphis/Mid-South Manufacturers published in 1970 is 23,896 while the responding industries reported 26,522 in March and April 1972 which is an increase of 2,626. This 11% increase could possibly be an indication of the growth of the industries polled.

Table 2

NUMBER OF EMPLOYEES OF RESPONDING INDUSTRIES
ESTIMATED AND REPORTED

Responder No.*	Estimated No. Employees	Reported No. Employees
1	175	175
2	175	135
4	375	320
5	17	8
6	175	225
7	2000	2000
8	175	155
9	175	91
10	75	90
11	175	100
12	75	40
14	750	900
15	17	19
16	17	16
17	375	300

Table 2 (continued)

Responder No.*	Estimated No. Employees	Reported No. Employees
18	37	33
19	75	75**
20	750	832
21	75	75**
22	75	102
23	175	175**
24	75	56
25	750	510
26	375	330
27	375	156
28	75	55
29	750	1015
30	750	550
31	375	200
32	2000	5000
33	175	75
34	375	426
35	375	375**
36	375	300
37	75	70
38	17	51
39	2000	1278
40	75	76
41	175	487

Table 2 (continued)

Responder No.*	Estimated No. Employees	Reported No. Employees
42	175	230
43	37	30
44	175	125
45	375	300
46	175	250
48	175	27
49	2000	1400
50	350	350
51	75	10
52	375	370
53	37	37**
54	37	35
55	175	150
56	75	72
57	5	4
58	2000	2976
59	375	280
60	2000	2600
61	175	400
Totals	23,896	26,522

* Responder number randomally selected

** Responder did not answer question -- estimate used

Table 3 indicates the size of the polled industries whose questionnaires were returned by the Post Office with markings indicating that the company no longer existed. These companies had an estimated 587 employees which represented only 1.5% of the estimated 37,737 employees of the industries polled.

Table 3

INDUSTRIES POLLED, QUESTIONNAIRE RETURNED
COMPANY NO LONGER IN BUSINESS

Responder No.	Estimated No. Employees
3	37
13	175
47	375
Total	587

Table 4 reflects the estimated size of the industries polled that did not respond to either mailing of the questionnaire. The non-responding industries had an estimated 13,254 employees or 35.1% of the total of the polled industries.

Table 4

INDUSTRIES POLLED, NO RESPONSE

Responder No.	Estimated No. Employees
62	375
63	175

Table 4 (continued)

Responder No.	Estimated No. Employees
64	175
65	37
66	75
67	17
68	75
69	75
70	75
71	750
72	175
73	750
74	175
75	2000
76	750
77	175
78	750
79	750
80	375
81	75
82	375
83	75
84	75
85	375
86	75
87	375

Table 4 (continued)

Responder No.	Estimated No. Employees
88	2000
89	75
90	75
91	175
92	75
93	75
94	175
95	75
96	375
97	75
98	375
99	175
100	375
Total	13,254

Tables 1, 2, 3, and 4 are summarized in Table 5 which reports that the industries polled had an estimated 37,737 employees. The responding industries had an estimated 23,896 employees, non-responding industries had an estimated 13,254 employees, and industries polled but reported no longer in business had an estimated 587 employees.

It should be noted that the responding industries represented 63.4% of the total estimated number of employees of the polled industries.

Table 5

SUMMARY OF POLLED INDUSTRIES

Questionnaire Status	Number	Reported No. Employees	Estimated No. Employees	% of Estimated Total
Returned	58	26,522	23,896	63.4%
Returned by P.O.	3		587	1.5%
No Response	39		13,254	35.1%
Totals	100	26,522	37,737	100.0%

Table 6 indicates the locations of the industries polled and the percentage return obtained from the different locations.

Study of Table 6 does not give information upon which a conclusion can be made; however, a review of responding and non-responding industries (Appendix A) reveals that only one industry out of seven polled located outside Shelby County, Tennessee; Crittenden County, Arkansas; and DeSoto County, Mississippi, responded to the poll. This 14.3% response from industries outside Shelby (county in which Memphis is located) and adjacent counties indicates a possible lack of interest by them in the Memphis labor force. This indication of a lack of interest in the Memphis labor force by industries located within an eighty mile radius of Memphis should be investigated using a larger sample size. Further study of Appendix A revealed an indicated high interest in the Memphis labor force by West Memphis, Arkansas, industries as all five industries polled responded.

Table 6

LOCATIONS OF INDUSTRIES POLLED

Location	No. Polled	No. Responses	% Response
Memphis, Tenn.*	78	46	59.0%
Tennessee	10	3	30.0%
Arkansas	6	5	83.5%
Mississippi	6	3	50.0%
Totals	100	57	57.0%

* 3 industries no longer in business

Classification of Technical Employees

Table 7 reflects the responses to Question 5 which requested the responding industries to indicate the classification of their technical employees. In order to reduce the problem caused by the variance in definition of the term "technician", a widely accepted definition of the term "technician" was given.

From Table 7 it can be seen that the reporting industries have a ratio of 1.5 technicians to each engineer. This ratio is higher than the national average of two technicians for every five engineers, but lower than the national need, according to the American Society for Engineering Education, of two or three technicians for each engineer.

Comments made by the respondents are listed in the following tables. The responses to the particular questions have been added in parenthesis to clarify the comment.

Table 7

CLASSIFICATION OF TECHNICAL EMPLOYEES

Number of responses 54

Engineers	Technicians	Total	Ratio - Technician to Engineer
445	660	1105	1.5

Comments By Respondents With Regard to Question 4:

1. Draftsmen (Engineers 0 Technicians 2)
2. (4) Draftsmen (2) inspectors (Engineers 1 Technicians 6)
3. Of the above engineers seven are sales engineers. (Engineers 11 Technicians 5)
4. All engineering projects sent to home office. (Engineers 0 Technicians 0)
5. Does not apply. (Engineers __ Technicians __)
6. As one small plant within the corp we get our technical manpower for the corp on a temporary loan basis. (Engineers 0 Technicians 0)
7. Most of these are inspectors, production equipment maintainers and mechanical supos. (Engineers 4 Technicians 56)
8. 2 have degrees in math and are considered engineers on basis of experience. (Engineers 0 Technicians 8)
9. Technicians are in Laboratory or Quality Assurance Field. (Engineers 1 Technicians 18)
10. Information confidential--therefore, will not fill out questionnaire. (Engineers __ Technicians __)

11. Technicians are mechanics. (Engineers 1 Technicians 3)

12. "Technicians" include fourteen (14) lab technicians in Quality Control and two (2) Engineering Aides. (Engineers 2 Technicians 16)

13. We do our own design and actually build our production machinery. (Engineers 1 Technicians 6)

Utilization of Engineers

Thirty-eight (38) industries indicated that 26.7% of 100 engineers' time was spent in technician level activities (see Table 8). This does not mean that these companies should replace 27 engineers with technicians as the comments of the responders indicate that determining the time an engineer spends at the technician level is difficult and spending some time at the technician level by engineers is unavoidable.

The data collected from responses to Question 5 of the questionnaire and displayed in Table 8 does not reveal information upon which a definite conclusion can be made, but it does indicate that an in depth study of the utilization of technical manpower is merited.

Table 8

UTILIZATION OF ENGINEERS

Number of responses 38

No. Engineers Listed	Percent of Time As Technicians
100	26.7%

Comments By Respondents With Regard To Question 5:

1. N/A. (11 responders)

2. Time is usually field adjusting of equipment. (Number 3 Percent of time 15%)
3. This would be more in the area of supervising and advising technicians, working with them. (Number 10 Percent of time 15%)
4. V. P. is also engineer. (Number 1 Percent of time 50%)
5. For training purposes only. (Number 1 Percent of time 100%)
6. Most Salesmen don't speak to engineers at the engineering level. (Number 2 Percent of time 95%)
7. None should be. Very difficult to determine. (Number __ Percent of time ___)

Present Employment of Mechanical Engineering Technicians

Question 6 and 7 were designed to discover the number of mechanical engineering technicians presently employed by the responding industries and the subdivision of the broad mechanical field wherein these technicians worked.

Tables 9 and 10 tabulate the responses to Questions 6 and 7.

Table 9 reflects that 48 respondents report 234 mechanical engineering technicians while Table 10 reflects that 36 respondents utilize 290 technicians in subdivisions of the mechanical field. This disagreement in totals could be from (1) companies utilizing non-mechanical technicians in the subdivisions, (2) a difference in interpretation by the responding companies of the definition of "mechanical engineering technician", or (3) incomplete analysis by the respondents.

Table 10 (page 18) reveals heavy utilization of mechanical technicians in drafting, design, production control, quality control, and production supervision. These five subdivisions are commonly found in two curricula of the mechanical field. Design and drafting in the mechanical design curriculum and production control, quality control,

and production supervision in the production curriculum.

A significant point that can be gained from Table 10 is the complete lack of emphasis in power production and combustion engines which are two traditionally important subdivisions of the mechanical engineering field. This lack of emphasis in power production and combustion engines does not indicate that these two areas of study can be disregarded in curricula for the Memphis and Mid-South mechanical technician student for it should be noted that this survey covered only manufacturing industries. More emphasis on these two subdivisions and on heating and air conditioning would probably exist in a survey covering building and plant construction and maintenance; therefore, a survey covering these important subdivisions of the mechanical engineering field should be made.

Table 9

MECHANICAL ENGINEERING TECHNICIANS EMPLOYED

No. Responses	No. M.E. Technicians
48	234

Comments By Respondents With Regard To Question 6:

1. Plant engineer (undergraduate) 2 - Tool and Die Men (Number 3)
2. (4) Draftsmen (2) Inspectors (Number 6)
3. Master Mechanic (Number 1)
4. We do not have specific ME Technicians. Each is able to work ME, CE or Structural as required. (Number --)
5. Those listed in Question #4. (Number 90)

Table 10

SUBDIVISIONS OF MECHANICAL ENGINEERING FIELD
WHEREIN MECHANICAL TECHNICIANS ARE EMPLOYED

Number of responses 36

M. E. Sub-division	Number	% of Total
Design	40	13.8%
Drafting	101	34.8%
Sales	8	2.8%
Power Production	1	0.3%
Combustion Engines	0	0.0%
Production Control	45	15.5%
Quality Control	44	15.2%
Heating and Air Conditioning	9	3.1%
Production Supervision	29	10.0%
Other		
Tech Order Interpretation	1	0.3%
Estimating	1	0.3%
Smoke Abatement	1	0.3%
R & D Work	4	1.3%
Plant Engineering	2	0.7%
Tool and Die	2	0.7%
Miscellaneous	2	0.7%
Totals	290	99.8%

Comments By Respondents With Regard To Question 7:

1. Our small group has duties in the above categories. (Design, Drafting, Sales, Power Production, and Combustion Engines checked)
2. Vice Pres is engineer. (No subdivisions checked)
3. Maintain Mechanical Equipment (No subdivisions checked)
4. All do some drafting in design process. (Design 9 Drafting ?)

Technical Personnel Needed Immediately

Table 11, Technical Personnel Needed Immediately, indicates the responses to Question 8 which was designed to determine the immediate employment opportunities for technical personnel. Forty-five (45) industries responded showing a need for 25 technical personnel immediately. Considering that the respondents represented 40% of the manufacturing employment in the Memphis and Mid-South area (see note), there is probably employment for 60 to 70 engineers and technicians in the Memphis and Mid-South area immediately--a very healthy employment outlook. (Note: The Memphis Area Chamber of Commerce reported 59,700 manufacturing employment positions in an undated supplement to Memphis/ Mid-South Manufacturers, 1970 edition.)

Table 11 reveals that 18 of the 25 employment opportunities are for mechanical technicians. Expanding this data to cover the entire manufacturing industry, there is a probable need for approximately 45 mechanical technicians immediately.

The immediate need for "All other technicians" reflected in Table 11 is only 3. This is an exceedingly low requirement, and it is felt that the respondents train of thought had been directed by the questionnaire to considering the mechanical field and other fields were excluded by the responders giving an unreliable summary of need for other technicians.

One interesting comment by a respondent was comment number 6 which pointed out the shortage of minority engineers. This comment was the only mention of the shortage of minority technical employees in the entire response to the survey. Since several companies had querried this writer as to the availability of minority technical personnel, it is felt that securing minority technical personnel is a greater problem for Memphis and Mid-South industries than is indicated by this survey. The problem of availability of minority technical personnel should be investigated in another research effort.

Table 11

TECHNICAL PERSONNEL NEEDED IMMEDIATELY

Number of responses 45

Title	Need
Engineers	4
Mechanical Technicians	18
All other technicians	3
Total	25

Comments By Respondents With Regard To Question 8:

1. N/A (No need indicated)
2. None at present (No need indicated)
3. None presently (No need indicated)
4. We have one Maintenance Engineer. Work along this line is sub-

contracted. (No need indicated)

5. No actual openings at present, but number needed might vary monthly or with business trends. (No need indicated)
6. We feel there is an adequate supply of engineers, although there is a shortage of minority engineers. (No need indicated)
7. Our present staff is sufficient. (No need indicated)
8. We have staffed our plant and will promote and train from our present work force. (No need indicated)
9. Our work load doesn't require any immediately. (No need indicated)
10. We have had an over abundance of applications in the past year. (No need indicated)
11. None at present (No need indicated)
12. None at this moment (No need indicated)
13. We will hire additional Quality Control Technicians this year, but have no immediate openings. (No need indicated)
14. We are furnished with Eng. assist. from our Parent Office--Chicago. (No need indicated)
15. No anticipated openings at this time. (No need indicated)
16. Budget considerations (Engineers _?_ Mechanical Technicians _6_ All other technicians _?_)

Present and 5-year Projected Need For Mechanical Engineering Technicians

Table 12 is a summation of the responses to Question 9 which delt with the present and 5-year projected need of the various classifications of mechanical engineering technicians by the responding industries.

Study of Table 12 highlights the need of the manufacturing industries of the Memphis and Mid-South area for technicians supplied by two curricula. These are the mechanical design curriculum and the

mechanical production curriculum. When the subdivisions which are parts of these two curricula are totaled this becomes apparent. Combining tool design, machine design, drafting and engineering aides results in a 37 present need (31.5% of total) and 175 5-year projected need (39% of total). Combining inspectors, quality control technicians, production control technicians, time and motion technicians, and estimators results in 39 present need (33.3% of total) and 205 5-year projected need (45.5% of total).

Table 12

PRESENT AND 5-YEAR PROJECTED NEED FOR MECHANICAL ENGINEERING TECHNICIANS

Number of responses 36

Mechanical Technicians	Present Need	5-year Projected Need
Draftsmen	22	79
Laboratory (Test)	19	32
Estimators	7	18
Engineering Aides	1	66
Tool Designers	11	22
Machine Designers	3	8
Maintenance Technicians	13	43
Inspectors	11	38
Quality Control Technicians	11	53
Production Control Technicians	4	26
Technical Representatives	2	6
Engineering Technicians	6	30

Table 12 (continued)

Mechanical Technicians	Present Need	5-year Projected Need
Mechanical Equipment Technicians	0	3
Time and Motion Technicians	8	24
Other		
Process Engineering	1	2
Totals	117	450

Comments By Respondents With Regard To Question 9:

1. Personnel with two-year degrees in chemical technology are not generally required in our laboratory activities. (Engineering Technicians Present Need 0 5-year Projected Need 19)
2. Need additional training for 3 Production Control Technicians now. (Various types Present Need 4 5-year Projected Need 19)
3. None at present (No need indicated)
4. N. A. (No need indicated)
5. Our type industry requires mostly basic working knowledge in engineering mechanics. Highly qualified engineering personnel is required only for new products. (Less than 10% of total manpower requirements) (Various types Present Need 0 5-year Projected Need 6)
6. Some of our Quality Control technicians might be categorized as "mechanical", inasmuch as their work involves analysis of the mechanical packaging process and analysis of incoming materials. (Qual-

ity Control Technicians Present Need 0 5-year Projected Need 10)

7. None of these job categories (or our corresponding titles) fall within the Mechanical Engineering Department. (Tool Designers Present Need 9 5-year Projected Need 4)

Difficulty in Employing Mechanical Technicians

Table 13 tabulates the answers of the respondents as to whether the respondent had or did not have difficulty in employing mechanical technicians. Eighteen (18) industries of 41 reporting or 44% indicated they had difficulty.

The comments made by the respondents indicate that those having difficulty were those requiring expertise in specific areas, such as irrigation, pneumatics, heating, air conditioning, and incineration.

Conclusions should not be made from the responses to this question as too many factors affect a company's recruiting efforts. Some of these factors are salary, location, working conditions, trade union requirements, and promotion opportunity.

Table 13

DIFFICULTY IN EMPLOYING MECHANICAL TECHNICIANS

Number of responses 41

Yes	No	% Having Difficulty
18	23	44%

Comments By Respondents With Regard To Question 10:

1. Irrigation Equip. is not a generally known subject and sources of

trained employees small. (Yes)

2. Few are available with knowledge in pneumatic conveying and incineration. (Yes)
3. Number of well-trained applicants in rather short supply. (Yes)
4. We have just not had a problem with vacancies. (No indication)
5. Draftsmen are difficult to find. (Yes)
6. Not at present but we can see need for training to supply future needs. (No)
7. We will now train from our present work force but the few we need to hire outside are usually available. (No)
8. Heating, ventilating, air conditioning, plumbing (Yes)
9. Very little turnover. (No)
10. Due to qualification requirements (Yes)
11. Engineering tech. not available (Yes)
12. Somewhat (No indication)

Sources of Recruitment of Technician Level Employees

The responses to Question 11 which delt with the sources used by the respondents to recruit technician level employees are tabulated in Table 14. While the tabulated results are interesting, it is difficult to make conclusions from the data.

Forty-two industries indicated sources of recruitment of technician level employees. Of these, 33 indicated the per cent employed from each source and 9 indicated the sources used without stating a percentage.

Tabulation of those reporting source percentage reveals four areas with significant percentages. These areas are: upgrade promising employees (34%), employ personnel that have received training while employed by other companies (25.3%), employ personnel with some

college and train them on the job (15.0%), and employ formally trained technicians from technical institutes and junior colleges (7.9%).

Table 14

SOURCES OF RECRUITMENT OF TECHNICIAN LEVEL EMPLOYEES

Number of responses 41

Source	Number	Percentage
Employ engineers as technicians	4	1.7%
Employ formally trained technicians from technical institutes and junior colleges	10	7.9%
Employ formally trained personnel from technical high schools	5	1.2%
Employ formally trained personnel from area vocational schools	7	2.6%
Upgrade promising employees and train them on the job	29	34.0%
Send promising employees to company sponsored schools	4	0.6%
Employ personnel with some college and train them on the job	21	15.0%
Employ personnel who have been trained in the armed forces as technicians	8	4.0%
Employ personnel that have received training while employed by other companies	28	25.3%
Upgrade employees by either paying all or part of the cost of continuing their education on "non-company time"	11	14.3%
Varies	5	3.6%
Total	127	100.0%

Comments By Respondents With Regard To Question 11:

1. Many are upgraded and given additional on the job training. (Various indications)
2. Any attempt to list percentage would be misleading--we have used the methods checked as they are available. (Various indications)
3. All employees are encouraged to take job related courses with a major portion of the expense paid for by the company. (Upgrade promising employees and train them on the job 80 per cent Employ personnel with some college and train them on the job 50 per cent)
4. Our need is so low that percentages are not available. (Several sources indicated with no percentages)

Salary Range of Engineering Technicians

The salary range that can be expected by the engineering technician is reflected in Table 15 wherein the responses of 41 industries are tabulated.

The average beginning salary of the engineering technician is $577.00 a month. The average of the high salaries reported is $851.00 a month. The mean salary is $740.00 a month.

Table 15

SALARY RANGE OF ENGINEERING TECHNICIANS

Number of responses 41

Responder No.	From	To	Average
1	$833	$1000	$916
2	$750	$850	$800

Table 15 (continued)

Responder No.	From	To	Average
4	$640	$972	$806
5	$450	$700	$580
7	$500	$800	$650
8	$433	$750	$586
9	$450	$610	$530
10	$720	$1000	$860
11	$600	$750	$678
14	$750	$900	$825
16	$500	$650	$575
20	$500	$600	$550
24	$650	$700	$675
25*	$510	--	--
26	$520	$675	$598
27	$550	$950	$750
28*	$600	--	--
29	$600	$800	$700
30	$400	$800	$600
31**	$1200	$2000	$1600
32	$500	$700	$600
33	$600	$1000	$800
34	$450	$750	$600
36	$475	$800	$638
37	$500	$600	$550
38	$600	$1680	$1140

Table 15 (continued)

Responder No.	From	To	Average
40	$500	$800	$650
41	$400	$600	$500
42	$500	$700	$600
43	$500	$700	$600
44	$560	$615	$588
45	$600	$800	$700
46	$400	$800	$600
49	$850	$1050	$950
50	$494	$740	$617
54	$600	$900	$750
56	$750	$800	$775
57	$400	$1000	$700
58	$525	$735	$630
60	$800	$1100	$950
61	$425	$850	$637
Averages	$577	$851	$740

* Not used in high or average computations.

** Not used in average computations.

Comments By Respondents With Regard To Question 12:

1. Salaries are strictly confidential. (No indication)

2. Varies with responsibilities, previous training, etc. (From $500

To $600)

3. N. A. (No indication)

4. N. A. (No indication)

5. Company policy forbids disclosure. (No indication)

Obstacles to Employment

Questions 13 and 14 were designed to determine obstacles to employment such as union membership and apprenticeship requirements.

There were 47 responses received regarding union membership, and these responses are tabulated in Table 16. Only seven responders indicated a union membership requirement while 41 indicated no union requirement. One company responded both yes and no.

Considering the preponderance of firms that do not require union membership for technicians and the fact that some respondents indicated in added comments that their answer of yes was not applicable in all cases, union membership does not appear to be a serious obstacle to employment as a technician in the Memphis and Mid-South area.

Table 16

UNION MEMBERSHIP REQUIREMENT FOR TECHNICIANS

Number of responses 47	
Yes	No
7	41

Comments By Respondents With Regard To Question 13:

1. 90% of the openings would not require union membership. (No)

2. Except for inspectors (No)
3. Lab technicians can belong to union. (No)
4. Except for a few supervisors (Yes)
5. We use no union employees. (No)
6. In some classifications (Yes)
7. However we are not a closed shop and membership is not mandatory. (Yes)
8. For some lab work only (Yes)
9. Some jobs do; others do not. (Yes and No)

Table 17 indicates those respondents that have or have not a requirement for service at the apprenticeship level before full employment at the technician level can be obtained. Seven industries reported an apprenticeship requirement that averaged 2.28 years in duration. Two industries indicated that the requirement or non-requirement of apprenticeship service was union rules while eleven indicated the rules were of company origin.

From Table 17, it can be concluded that service at the apprenticeship level is not a great problem to mechanical engineering technicians seeking employment in the Memphis and Mid-South area.

Table 17

APPRENTICE LEVEL REQUIREMENT FOR MECHANICAL ENGINEERING TECHNICIANS

Number of responses 47

Yes	No	Union Rules	Company Rules	Ave. Length
7	40	2	11	2.28 years

Comments By Respondents With Regard To Question 14:

1. Depends on individual (Yes - Company Rules)
2. No exact duration--depends on employee (Yes - Company Rules)
3. This increases from start to top merit rate. (Yes - Company Rules - Apprenticeship 1.5 years)
4. No apprenticeship program--N/A (No - Company Rules)
5. Desired for tool and die makers (No - Company Rules _ Apprenticeship 4 years)

Recruiting Policy at Educational Institutions

Table 18 reflects the respondents replies to Question 15 which asked the respondent to outline their policy in regard to recruitment at educational institutions.

The data displayed in Table 18 indicates that 14 companies do not recruit at educational institutions. Effort should be made by placement offices to reduce this percentage.

One significant fact gained from study of Table 18 is that accreditation by the Engineering Council for Professional Development (ECPD) is an asset as 11 industries (25.6% of the responders) indicate recruitment at ECPD accredited institutions only, and 6 industries (13.9% of the responders indicate a preference for ECPD accredited institutions.

(See next page for Table 18)

Table 18

RECRUITING POLICY AT EDUCATIONAL INSTITUTIONS

Number of responses 43

Policy	Number	Per cent
Company does not recruit employees from educational institutions	14	32.6%
Company recruits at accademically accredited institutions	12	27.9%
Company recruits at ECPD accred-institutions only	11	25.6%
Company prefers to recruit at ECPD accredited institutions, but must recruit at others to fullfill need	6	13.9%
Totals	43	100.0%

Comments By Respondents With Regard To Question 15:

1. No restrictions (No indication)
2. Company does not restrict its recruiting. (Company recruits at accademically accredited institutions)
3. Our company is quite small and perhaps the foregoing information is not applicable to your survey. Several items are checked in reply to some questions, as these practices have been used at one time or another. (Company recruits at accademically accredited institutions and Company prefers to recruit at ECPD accredited institutions, but must recruit at others to fullfill need)
4. Through Employment Agencies, etc. (No indication)

5. No formal recruiting program (No indication)
6. Our company will hire any qualified individual who we think can perform satisfactorily for our company. (No indication)
7. Mostly look for applicants who have qualifications for job--regardless of how they became qualified. (No indication)
8. Technicians are normally hired on direct application basis and on referrals from employment agencies. Four year mechanical engineers are employed through formal recruiting program at selected universities. (No indication)
9. We have contacted M. S. U. when we were looking for engineering technicians however I wouldn't consider this "recruiting". (No indication)
10. We are not familiar with ECPD. (Company recruits at accademically accredited institutions only)
11. We recruit from all sources. (Company prefers to recruit at ECPD accredited institutions, but must recruit at others to fullfill need)
12. Doing no recruiting at present (No indication)
13. Uncertain (No indication)
14. Will recruit from any source that offers the qualified personnel desired. (Company recruits at accademically accredited institutions)
15. No source excluded (No indication)

SUMMARY

This investigation was undertaken to discover the occupational opportunities of associate degree mechanical engineering technicians in the Memphis and Mid-South area. It was felt that the information required to discover these opportunities could best be obtained through

a survey using a questionnaire as the data collecting instrument.

The questionnaire (Appendix B) was a fifteen question instrument with space for comments by the responder after all but the first three questions. The questionnaire was utilized as follows:

1. Questions 1 and 2 were used to identify the responder and to collect the responder's correct, up-dated address. The names and addresses of all polled companies are reflected in Appendix A.

2. Question 3 was used to establish the responders total number of employees.

3. Question 4 requested the number of engineers and technicians employed by the responder. The responses to this question are reported in the section titled Classification of Technical Employees.

4. Question 5 delt with the time the employees, classified as engineers, spend in technician type activity. Responses to this question are reported in the section titled Utilization of Engineers.

5. Question 6 was used to establish how many of the technicians employed by the responder are classified as mechanical engineering technicians. Question 6 responses are reported in the section titled Present Employment of Mechanical Engineering Technicians.

6. Question 7 requested the responder to indicate the subdivisions of the broad mechanical engineering field wherein the technicians classified as mechanical engineering technicians worked. The responses to this question are reported in the section titled Present Employment of Mechanical Engineering Technicians.

7. Question 8 was used to establish the immediate need of the responder for engineers, mechanical engineering technicians, and all other classifications of technicians. Responses to this question are reflected in the section titled Immediate Engineering and Technician

Need.

8. Question 9 was used to establish the classification of mechanical engineering technician needed immediately by the responder and his projected 5-year need. Responses to this question are reported in the section titled Present and 5-year Projected Need For Mechanical Engineering Technicians.

9. Question 10 was used to determine whether the responder had difficulty in employing mechanical engineering technicians. Question 10 responses are reported in the section titled Difficulty in Employing Mechanical Technicians.

10. Question 11 was used to determine the recruiting sources used by the responder. Responses to this question are reflected in the section titled Sources of Recruitment of Technician Level Employees.

11. Question 12 was used to determine the salary range of the engineering technicians employed by the responder. Tabulation of responses to Question 12 are reported in the section titled Salary Range of Engineering Technicians.

12. Questions 13 and 14 were used to reveal obstacles to employment for the engineering technician such as union membership or apprenticeship requirements. Responses to Questions 13 and 14 are reported in the section titled Obstacles to Employment.

13. Question 15 was used to determine the type of educational institution used as a recruiting source by the responder. Question 15 responses are reported in the section titled Recruiting Policy at Educational Institutions.

Fifty seven industrial organizations returned the survey instrument, and the responses on these questionnaires were used to compile this report. Three of the survey questionnaires were returned by postal

employees as non-deliverable. One company returned its questionnaire too late to be included in this report.

There were four stated problems of this investigation. They were:

1. To determine the employment opportunities of the associate degree mechanical engineering technician.

2. To determine the qualifications expected of associate degree mechanical engineering technicians.

3. To determine the salary range that can be expected by the engineering technician.

4. To determine obstacles to employment confronting the mechanical technicians such as union membership and apprenticeship requirements.

Responses to Questions 8 and 9 tabulated in Tables 11 and 12 indicate that employment opportunities for mechanical engineering technicians are excellent. The immediate need of eighteen (18) mechanical engineering technicians reported by the responding industries exceeds the number of 1972 mechanical engineering technician graduates from the State Technical Institute at Memphis. Since the respondents represented forty per cent of the manufacturing employment in the Memphis and Mid-South area, it is reasonable to assume that approximately forty-five (45) employment opportunities exists for the mechanical engineering technician immediately.

The 5-year projected need of mechanical engineering technicians by the responding industries far exceeds the forecasted number of graduates from the State Technical Institute at Memphis. The 5-year projected need of the reporting industries was for 450 mechanical engineering technicians. Assuming that this figure represents forty per

cent of the total need, the 5-year projected need for mechanical engineering technicians is 1,125 or 225 per year. It is realized that the entire need will not be satisfied by filling the positions with graduates from the State Technical Institute at Memphis, but if only 7.9% are recruited from technical institutes as indicated in Table 14 there will be employment for eighteen (18) technical institute graduates a year in the manufacturing industries alone.

Considering the above points, the employment opportunities of associate degree mechanical engineering technicians in the Memphis and Mid-South area are excellent.

The qualifications or skills required of the mechanical engineering technicians are outlined in Tables 10 and 12. Table 10 reports the areas wherein mechanical engineering technicians presently employed are assigned, and Table 12 indicates the areas of present and future need wherein mechanical engineering technicians are to be employed.

Analysis of Table 10 points out that 48.6% of the mechanical engineering technicians are now employed in design and drafting and 40.7% are employed in production control, quality control, and production supervision.

The present and 5-year projected need for mechanical engineering technicians is shown in Table 12. This table reveals that the mechanical engineering technician required in the future will require skills in the same areas as those now employed. As reflected in Table 10, two general divisions of the mechanical field are emphasized in Table 12. These areas are the design area and the production area. (See comments in the section titled Present and 5-year Projected Need for Mechanical Engineering Technicians.)

A wide salary range was reported by the responding industries.

The lowest reported beginning salary was $400.00 per month, and the highest salary reported was $2000.00 a month. The average of the beginning or lower side of the ranges reported by the responders was $577.00 a month. The average of the high side of the ranges reported by the responders was $851.00 a month. It is felt that the average salaries listed above are representative of the range of salary that can be expected by the mechanical engineering technician.

The obstacles to employment as mechanical engineering technicians appear minimal. Only 17% of the reporting industries indicated union membership as a requirement for employment, and only 15% indicated service was required at the apprentice level before full employment as a technician could be obtained.

Recommendations

Considering the findings of this investigation the following recommendations are made:

1. That the State Technical Institute at Memphis continue to offer the Mechanical Engineering Technology curriculum as published in State Technical Institute at Memphis Catalog, 1972-73. This curriculum will equip students with skills enabling them to accept the draftsmen, tool design, machine design, and engineering technician employment opportunities indicated in Table 12.

2. That the State Technical Institute at Memphis increase its curriculum offerings to include a Production Option in the Mechanical Engineering Technology Department or an Industrial Engineering Technology curriculum (Appendix E) as proposed by this writer to the Engineering Division of the State Technical Institute at Memphis on June 9, 1972. This curriculum will equip students with the skills required to accept

the inspection, quality control, production control, and time and motion employment opportunities pointed out in Table 12.

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TRAINING AND RETRAINING OF WORKERS, TECHNICIANS AND ENGINEERS IN THE CHEMICAL INDUSTRIES.

INTERNATIONAL LABOUR OFFICE, GENEVA (SWITZERLAND). CHEMICAL INDUSTRIES COMMITTEE.
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ABSTRACT - PRESENTED ARE THE CONTENTS OF A REPORT SUBMITTED TO THE INTERNATIONAL LABOR ORGANIZATION AT ITS SEVENTH SESSION BY THE CHEMICAL INDUSTRIES COMMITTEE. DIVIDED INTO FIVE PARTS AROUND A THEME OF VOCATIONAL TRAINING AND RETRAINING OF WORKERS, TECHNICIANS, AND ENGINEERS IN THE CHEMICAL INDUSTRY, THE REPORT COVERS THE FOLLOWING TOPICS: (1) THE ELEMENTS OF CHANGE (FACTORS INFLUENCING THE PATTERNS OF TRAINING), (2) ELEMENTS FOR PLANNING (BASIC ELEMENTS INVOLVED IN PLANNING TRAINING STRATEGIES IN DEVELOPING COUNTRIES), (3) PROGRAMS OF TRAINING IN KEY OCCUPATIONS (CONTENT OF PROGRAMS IN SELECTED OCCUPATIONAL AREAS), (4) THE ADMINISTRATION OF TRAINING AND RETRAINING (CHANGING TRAINING SCHEMES AND OPPORTUNITIES AND THEIR INFLUENCE ON THE ESTABLISHED CRITERIA), AND (5) SUGGESTED POINTS FOR DISCUSSION. (SM)

VT 017 531

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REPORT III

International Labour Organisation

CHEMICAL INDUSTRIES COMMITTEE

SEVENTH SESSION

GENEVA, 1969

Training and retraining of workers, technicians and engineers in the chemical industries

Third Item on the Agenda

Report prepared by the International Labour Office

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1969

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Report III

International Labour Office

CHEMICAL INDUSTRIES COMMITTEE

Seventh Session

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Third Item on the Agenda

Report prepared by the International Labour Office

International Labour Office
Geneva
1969

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INTRODUCTION

At its Third Session, Geneva 1952, the Chemical Industries Committee of the International Labour Organisation examined questions relating to vocational training in the chemical industries on the basis of a report prepared by the Office.[1] Ten years later, at its Sixth Session in 1962, a short review of the situation and of developments since 1952 in the field of vocational training for the chemical industry was prepared for the Committee as a chapter included in the general report.[2] For this reason the present report will primarily deal with trends and developments which have become apparent in this field since 1962.

At its Sixth Session, the Chemical Industries Committee proposed to include a question relating to vocational training in its agenda for the Seventh Session. Acting on the basis of this proposal, the Committee of Industrial Committees of the Governing Body recommended that one of the two technical questions to be included in the agenda of the Seventh Session of the Chemical Industries Committee be formulated as follows:

> "Vocational training and retraining of workers, technicians and engineers in the chemical industry."

The Governing Body approved this recommendation at its 170th Session, Geneva, November 1967.[3]

The present report has been prepared on the basis of information received from various international and national organisations of employers and workers, the relevant public authorities and a great number of undertakings of the chemical industries in various countries. It is also based on documentation and information assembled by the Office.

The report is divided into five parts.

Part I restates briefly some of the major elements of change which may be expected to have a bearing particularly on the qualifications required of technical staff and other workers in the chemical industry;

Part II deals with the special training requirements of the chemical industries in developing and industrial countries respectively and with differences in needs - the basis for planning training and retraining action of smaller and larger undertakings in the industry;

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[1] Chemical Industries Committee, Third Session, Report II: Vocational Training in the Chemical Industries, ILO, Geneva, 1952, p. 68.

[2] Chemical Industries Committee, Sixth Session, Report I: General Report, ILO, Geneva, 1962, p. 203 (Chapter IV: Vocational Training in the Chemical Industries - Recent Developments, pp. 61-79).

[3] ILO, Official Bulletin, Vol. LI, No. 1, January 1968, pp. 17-18.

Part III relates to the programmes and content of training in what appears to be key occupations to which special attention has been given by the industry in various countries in the recent past;

Part IV deals with the influence of the changing training requirements and opportunities for training within undertakings on the organisation and administration and training and with the respective roles of the authorities, the educational systems, the employers and the workers in a co-operative effort towards the improvement of existing training patterns;

Part V finally contains a number of questions proposed to serve as a basis for discussion by the Committee.

CHAPTER I

THE ELEMENTS OF CHANGE

Factors Influencing the Patterns of Training

A great number of factors, some of them constituting continuing trends, others being comparatively new, have influenced the training pattern and modified the training requirements of the chemical industry in the recent past and are likely to continue to do so in the foreseeable future. Among these a few would seem to merit special attention: the establishment of chemical industries in developing countries in which chemical production did not exist before as one element in an over-all expansion of the chemical industry in both developing and industrial countries; the concentration of much chemical production to very large concerns parallel to a specialisation of individual plants on particular lines of production or products; the increasing emphasis on research and the shortening of the period allowed for translating the results obtained in the laboratories into full-scale manufacturing; the over-all growth of the chemical industry in relation to other industries; the increasing importance of chemical processes in other industries and economic sectors and the consequential increase in competition on the employment market for competent staff at all levels required by the chemical industry; the increased degree of mechanisation in materials' handling and packaging and the rapid advances made in the use of mechanical, electrical and electronic devices in process steering and control resulting in a steep rise in the investment into product development, installations and equipment per worker and, as a consequence, increased demands placed on each worker for knowledge, skill and a sense of responsibility.

To this list should be added the growing concern in wide circles over environmental factors and the responsibility of the chemical industry in this field - a trend which would seem to require staff at all levels of the chemical industry to learn completely new aspects of their work and of the influence of their activities on the milieu.

As explained in some detail in other reports submitted to the same session of the Committee, these and other factors have led to a continuing and accelerating structural change in employment in most branches of the chemical industry. There is an increase in the proportion of highly qualified staff at the engineer and technician levels, a similarly important increase in the employment of highly skilled workers and a relative decrease in the number of semi-skilled workers trained primarily in the production plants. In other words, despite relatively stable figures in employment in the chemical industries in many countries and in some cases even a decrease in over-all employment despite increased production, the need for training and for trained staff has increased. At the same time, the opportunities for training workers and technical personnel exclusively on the job in the production plants or in the laboratories would seem to be diminishing. This, in turn, means that the methods of training have had to be reviewed in many undertakings and the pattern of training changed to ensure broad, comprehensive understanding of the scientific and technological applications of the chemical industry and a familiarity with the conditions, methods and means of production. All these changes in the patterns and trends

converge in a need for the chemical industry as a whole to take more interest than previously in the over-all organisation and development of technical and vocational education and training within their countries and for the individual undertakings to create or expand their own facilities for initial and basic training, updating and retraining of their personnel at all levels.

Action taken by individual undertakings and associations of employers and workers show that there is an increasing awareness that the industry, in its own interest, and in the interest of their countries, needs to bring their influence to bear on the organisation and programmes of training in the universities, technical colleges, schools and training centres in which engineers, technicians, maintenance and process workers receive their initial and basic training before entering into employment. It also shows an awareness of the need for attending to the training needs of the staff employed in the industry to keep the engineers, technicians and workers up to date with development, to add new elements to the training they received in the past and to organise for retraining in the cases of comprehensive technical change and for training with a view to promotion as the general levels of knowledge and skill required are rising.

The changes in the employment pattern and the new demands placed on many engineers, technicians and workers in research, production, transport and sales, have led to the establishment of new occupational classifications at all levels of work and to a demand on the part of the chemical industry for special training arrangements to be made in the universities, technical colleges and vocational schools and in the apprenticeship systems to cater for the new needs of the industry.

Despite these changes and the resulting increase in the demand for knowledge and skill - which appears more prominent in the chemical industry than in most other branches of manufacturing - real shortages appear to exist primarily in those developing countries which are "new comers" in this industry. Even such countries as Argentina, Brazil and India do not suffer from a lack of applicants at the various levels of skill required at the level of recruitment into the industry. This may be considered as surprising also in view of the fact that the volume of training has diminished in many countries in some of the fields from which the chemical industry has traditionally recruited a substantial proportion of its skilled workers as, for instance, the artisan trades in continental Europe.

The principal problems in training and retraining would therefore, particularly in the industrial countries, appear to consist primarily in a qualitative adjustment to new or modified requirements.

CHAPTER II

ELEMENTS FOR PLANNING

The training problems which management, the industrial organisations and the authorities have to cope with differ profoundly between the industrial countries and the developing ones and within both, between the larger concerns and the smaller undertakings employing a few hundred workers or less. This is true, despite the fact that the manufacturing processes as such may be the same, irrespective of the size of the firm or the level of economic development reached in the country. This fact is borne out by the distinctions frequently made in the literature between countries with a "chemical tradition" and those which are new in the field.

Developing Countries

In those developing countries in which there has not existed any chemical industry before, the long-term problem which the authorities and the industry have to tackle is to build up a sufficiently broad know-how at all levels to move gradually from the initial dependence on foreign patterns of production, often also on foreign staff in all posts where special skill and knowledge are required to a state of relative independence in the recruitment and training of personnel. Obviously, this is often a very long-term perspective.

No country which is new in the field of chemical production, however good its facilities for training at the various levels, universities, technical schools and colleges, and vocational training institutions, is in a position to develop the whole structure of staff required for progressive chemical production in a short period of time. It would seem important, however, that this long-term perspective be kept in mind already at an early stage of development of the chemical industry in a developing country. The ultimate aims of action taken by the authorities and the industry must be to create, in the long run, a sufficiently wide range of training facilities to cater for the supply of staff with adequate initial and basic training to take over, or to take on the whole set of functions in research, product and process development, manufacturing, production control, packaging, distribution, transport and shipping which combined, make an industrial operation independent and complete.

In addition, long-term planning of technical and vocational education and training, which aims at promoting the establishment of a chemical industry in a country, must also include provisions for or influence over the training of staff needed for a whole range of auxiliary and infrastructural services without which the industry cannot function efficiently. In other words, the question relating to technical and vocational training in and for an industry such as the manufacturing of chemical products, must be seen as a part of an over-all planning of the education and training systems with a view to industrial development.

Only a country equipped with competent personnel at all levels in a wide range of industries and services can make full use of the opportunities for chemical production which its potential raw materials and power supply and other services available would permit.

This means that the training needs for expanding chemical production in developing countries go far beyond the comparatively narrow confines of the industry itself: they reach into the patterns of training in many other industries and trades, such as the machine building and electro-mechanic industries for the supply of parts, construction elements and components needed for erecting new plants, the infrastructural services for power supply, transportation, etc., the extractive industries, the forest and forest products industry and the supply of properly refined and processed raw materials. This is one of the basic problems of designing training programmes for the chemical industry: the efficient production of chemical products depends on the effectiveness of other industries and services. In most developing countries the quality, regularity and supply of such products and services is deficient, inter alia, for lack of competent personnel. In some of these countries no chemical industry can function at all unless parallel action is planned and implemented also in other fields of industrial production and service trades.

Even if the discussion of elements for planning is restricted to the needs for trained personnel of an individual plant, there are several problems which are peculiar to the situation in a developing country. First, the staffing pattern of a plant or a company in a developing country often is and has to be quite different from that of an undertaking located in an industrial region. One reason for this may be illustrated with reference to problems encountered in repair and maintenance. When trouble develops or a breakdown occurs in a plant in an industrial country, specialised repair and maintenance personnel can normally be called in from a machine or equipment manufacturers' plant located at a short distance from the plant concerned. Chemical factories in the centres of industrial activity, for instance in Europe, North America or Japan, can normally count on rapid delivery of spare parts and on specialised maintenance personnel to come at short notice when needed. Management can literally lift the telephone receiver, place the order and have the means to solve the problem at hand in a few hours or days. In contrast, a manager facing a similar problem in a plant in a developing country - even if this plant is closely related to a large undertaking abroad - has to overcome a great number of obstacles of communication, of foreign exchange barriers, of slow transports, etc. before he can even begin to tackle the problem.

Recruitment of well educated and well trained staff for key positions in production is also often more difficult. It is often repeated that the average quality of training in the universities, technical colleges and vocational training institutions does not measure up to the high standards required in many operations in the chemical industry. Moreover, chemical undertakings in developing countries cannot expect to recruit any considerable number of national technical staff and other trained workers with experience from other industries. Also many of the best students in the existing educational and training institutions tend to seek administrative positions rather than a career in industrial production, a fact which further restricts the recruitment possibilities for the undertakings. Industry often has to make do with the less qualified or organise a comprehensive training programme of its own, covering technical staff and other workers at practically all levels.

In other respects, the staffing pattern of a chemical plant or undertaking in a developing country might, on the other hand, be less comprehensive. Few such undertakings may, for instance, undertake their own products research and development work. At least in the initial stages in the establishment of a chemical industry the undertakings will largely have to depend on research done in other countries and even rely on foreign laboratories for the scientific analysis and control of raw materials and products. The same applies to the design and construction of plants and machines and equipment used in the manufacturing process.

The general statements above about the special needs and requirements and problems encountered in the establishment of a chemical industry in countries where such an industry has not existed before may be illustrated with reference to two examples, among many, taken from India and Brazil.

In India, a first fertilizer factory was started at Sindhri, Bihar, in 1951. It was the Government's first industrial undertaking after independence. A second factory was started ten years later and immediately thereafter work started on a third project and, again, six years later, three additional factories were nearing commissioning stage or were being built. It is expected that by 1970 seven factories will be in operation and that, also two of the earlier factories will have been enlarged.

In the initial operating stages the Government had to depend on foreign consultants and expatriate staff for practically all key operations from the design of the factory through the various building stages, the installation of plant and equipment and the organisation and starting up of production. Expatriate staff participated for a long period of time also in the management of production.

Gradually, the industry has made itself independent of help from outside. The enlargement of the two factories and the building of the latest additions to the chain of fertilizer production in India has been carried out practically entirely by staff trained within the industry. This has been made possible by the establishment of detailed training procedures at practically all levels of management, supervision and production and the organisation of training in the producing plants for engineers, technicians, maintenance and process workers.

The older factories have served as central training facilities in the scheme; many posts have been "doubled" with trainees and there has been a constant flow over the past ten years of trainee staff at all levels through these factories. Extensive use has also been made of the equipment manufacturers' personnel acting as instructors during the period of construction and commissioning of new plants before the organisation took over this function as well.

Parallel to this extensive in-plant training scheme, special training facilities were established at one of the plants for such functions which could not be systematically taught on the job and notably process control and various functions relating to repair and maintenance.[1]

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[1] Agarwal: Chemical Fertilizer and Prekash: process control instrumentation, Training for Progress, CIRF Publications (ILO), No. 2, 1968, p. 3-16.

Similarly, the petro-chemical industry in Brazil (Petrobras) has made an agreement with the National Vocational Training Service (SENAI) according to which the industry takes on primary responsibility, itself, for the training requirements of the industry. Specialised training centres have been established by Petrobras in various parts of the country. The company is also carrying out a comprehensive training scheme through rotation on the job at the various levels of management, supervision and production. In return, the Petrobras is exempted from paying 80 per cent of the apprentice tax which, otherwise, it would have to pay to SENAI as a contribution to the National Vocational Training Scheme. The remaining 20 per cent are considered as a contribution on the part of Petrobras to such lines of training in which the chemical industry has an interest in common with other industries in the country.

These figures may be considered as indicative of the size of the effort which a growing new chemical industry has to make to build up a competent workforce of its own and the relatively insignificant contribution on the part of the technical and vocational education and training systems on which it may count. It should be added that the rate of the apprentice levy in Brazil is 1 per cent of total personnel cost in the industry concerned and that it is known that Petrobras, in addition to the amount of the levy for which it is exempted, has found it necessary to invest quite considerable funds in the training of its personnel.

The Industrial Countries

Both the smaller and the larger undertakings in the chemical industry in the industrial countries have seen their training needs change and have had to modify their training patterns fundamentally in the past few years. The reasons for this are many and complex and can only be described in a summary form in this report.

One of the basic factors which has had a profound influence on the skill pattern required in the various fields of chemical production is the accelerated rate of products and process development and the concurrent shortening of the "lifetime" of individual products, production processes and equipment. This acceleration of the process of change creates special problems in an industry with a relatively stable employment, i.e. low intake of new recruits and a rising level of requirements with regard to skill and knowledge of those employed. Examples from practically all countries show that this has forced the industry and the undertakings to review their training programmes and to expand the facilities for training established by the individual companies or by groups of undertakings; it has also led management towards taking more interest than previously in the establishment of standards of and courses at university level, in the technical institutes and colleges and in the vocational schools.

On the whole, the trend seems to be that the industry is forced to rely to a greater extent than in the past on broad and comprehensive initial training to be given at all levels in the various educational and training institutions. One of the reasons for this would seem to be the gradual dissolution of past distinctions, for instance, between biology, chemistry, physics and other elements of the natural sciences, of which chemical production is a technological application, and of the once comparatively sharp distinctions between theoretical and applied science. At both the graduate engineer and

technician levels, specialisation at the initial stages of study has proved to constitute a dangerous limitation in the adaptability of the graduate in his future work in an industry which may only have a vague notion today of what products it will manufacture and what processes it will apply in ten years time.

At the same time, specialisation on the job is often narrower than in the past. This, again, leads to demands for increased training action at all levels within the undertaking.

These general statements apply, as will be shown in some detail in Chapter III, to the training at all levels: semi-skilled and specialised workers, skilled workers and other technical staff.

Reference should, in this connection, be made also to the increasingly intensive demands for environmental conservation, which, with their particular address to many of the traditional lines of chemical production, are likely to require further adjustment in the training of managerial and intermediate staff in the chemical industry. Research and process engineers and technicians will need to know not only how to manufacture a particular line of products, but also the influence of these products and of the waste materials let out from the factories on the biological and physical environment.

In short, the new demands on the engineer, the technician and the skilled worker in the chemical industry may be summarised in the following points:

(1) a basic foundation of knowledge and understanding of a broadening range of facts, conditions and inter-relationships over the whole field of applied science - from biology to electronics. In his initial training, he can no more be trained as a narrowly specialised "chemist", mechanic or electrician or as an ignorant operative of machinery whose functioning he does not understand;

(2) a high degree of adaptability developed by adequately organised technical education and training for work in an industry characterised by rapidly accelerating change in products, methods, processes and environmental demand;

(3) ability to reach a high degree of skill and knowledge in a comparatively narrow field of specialisation, developed by adequate initial training emphasising high standards of workmanship - whatever the level of education and training - followed by intensive training for adaptation to special tasks during the first periods of employment in an undertaking;

(4) willingness to learn new processes and skills and "technical curiosity", developed by frequent attendance at courses of further training within as well as outside the undertaking.

These are aptitudes, attitudes and intellectual characteristics which are difficult to develop and, consequently, in short supply in all countries. Hence the often pressing shortage of competent staff encountered at all levels of recruitment and training in many undertakings.

There is every reason to believe that these recruitment difficulties will continue to exist also in the future. As the proportion of skilled personnel compared to semi-skilled workers and labourers continues to increase, the chemical industry will have to devote more and more efforts to the organisation of training for its recruitment needs. This applies not only to the branches of engineering (e.g. chemical engineers, chemists, laboratory technicians), and the trades and occupations at worker level (e.g. skilled process workers), but also to the occupations and specialisations which the chemical industry has in common with other industries, such as general technical and office staff, mechanics, plumbers, electricians, welders and other craftsmen needed in most construction, maintenance and manufacturing processes. The demand for such trained personnel is on the increase in all sectors of industry. Despite the over-all increase in the numbers of youth and adults receiving training to recognised qualifications in most countries, in the past decade, supply does not satisfy demand in any but a few of these occupations.

Paraellel to this over-all increase in demand, some sources of recruitment show trends of diminishing intake and supply capacity. As one example, chemical industries in Continental Europe have traditionally recruited many of their maintenance and process workers among those trained to skilled standards in artisan trades and smaller service industries. These are now generally taking on a decreasing proportion of youth as voluntary school attendance increases and more youth go into training for industrial and commercial occupations in larger undertakings.

CHAPTER III

PROGRAMMES OF TRAINING IN KEY OCCUPATIONS

The wide range of differences between various countries as regards working conditions, and systems of technical and vocational education and training makes it impossible to carry out in detail a comparison between the training programmes introduced for the various specialisations at different levels in the chemical industry. There is also a difference in the speed of adaptation of the systems of technical and vocational education to new requirements of the industry which make comparisons difficult. The differences existing at the level of technical and vocational education and training and the degree of influence of the industry also has an impact on the extent to which the industry itself is taking action with regard to training of its personnel. Other factors are which branches of chemical industry dominate in each country, the supply of skilled personnel in the employment market and the degree of competition with other industries for personnel having qualifications required in the chemical industries. With these reservations, the discussion below can only be indicative of trends which have been identified in a number of countries. The examples should not be understood as models, but rather as a sample of approaches towards solving the problems encountered in improving training for the chemical industry.

Initial Training

Semi-Skilled and Specialised Workers

As a rule the training of semi-skilled and specialised workers requiring less than one or two years of instruction is unregulated and falls outside the officially recognised systems in most countries. One of the exceptions from this general rule is the Federal Republic of Germany where there are three recognised semi-skilled trades (Anlernberufe), namely:

(a) helper in chemical production;

(b) junior laboratory assistant;

(c) helper in rubber manufacturing.

In all three cases, training takes place in the undertaking accompanied by related instruction through day release, has a duration of two years and is terminated by an examination before a Chamber of Industry and Commerce. Among the functions enumerated in the syllabus for training of helpers in chemical manufacturing the following may be mentioned: repair and maintenance of simple equipment; participation in the assembly of more complex equipment and in the preparation of raw materials; simple operations of destillation, filtration and crystalisation, etc.; simple physical measurement and routine tests (specific weight, boiling point, etc.).

The job descriptions for the other two semi-skilled occupations are similarly geared towards the simpler and routine operations in laboratories and rubber manufacturing, in the latter case with emphasis

on the assembly of simple equipment and the preparation of products on the basis of detailed instruction.[1]

A study of training programmes operated in various industries shows, however, that there is a tendency, at least in the larger undertakings, to provide for a shorter or longer period of systematic training for a wide range of occupations at the semi-skilled level in laboratory work, production, transport and maintenance.

In the United States, for instance, the pharmaceutical industry, systematic training on the job ranging from some days up to six months, is given by the undertakings to specialised workers on elementary machine operations.

Similarly, a short period of systematic training is organised for workers concerned with materials selection, inspecting and measuring tasks and also for certain laboratory personnel for routine operations.

At least the larger undertakings normally organise part of this training outside the job as a course of induction followed by training on the job under specialised instructors or leading hands and under the general responsibility of the plant supervisors.[2]

In the United Kingdom, where training regulations have not yet been issued for other than skilled occupations in the chemical industry as such, the Iron and Steel Industry Training Board has recently published guidelines for a three-step training of specialised laboratory assistants in the chemical, metallurgical and petroleum industries. The programme which has a duration of approximately eitht months is specifically geared towards meeting the needs of young workers who have newly been recruited into the industry but may also be applied to the training of adult workers with some previous work experience.

In Sweden, the various branches and undertakings in the chemical industry organise special courses for semi-skilled workers normally of less than two years' duration. In the anorganic chemical industry, for instance, newly recruited workers aged 20 to 35 without previous work experience are trained according to a schedule which combines rotation on the job with related instruction for four hours per week for a total of 56 weeks. The related instruction includes such subjects as physics, chemistry and mathematics - largely refresher courses to update what was learned at school - and specific knowledge relating to materials, instruments and machines, job safety and accident prevention for the operations for the occupation to which the new worker has been recruited.

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[1] Institut Européen pour la Formation Professionnelle, La formation professionnelle dans la chimie du Marché Commun, Journées Européennes d'Etudes "La formation des hommes pour la chimie de demain". Wiesbaden, 26-28 November 1966, pp. 8-9.

[2] National Economic Development Office, Manpower in the Chemical Industry, a comparison of British and American practices, London, Her Majesty's Stationery Office, 1967, p. 29.

In the pharmaceutical industry, also in Sweden, and in the explosives industry, one year, full-time courses are organised for laboratory and production workers. The courses for junior laboratory assistants include 24 hours of practical work and training in laboratory methods and 14 hours of theoretical related instruction per week.

The courses for production workers combine 34 hours of on-the-job training with 8 hours of related instruction per week. Theory and practice should be closely related to each other. During the first half year the workers are rotated to three different work positions while during the second half of the course the trainee receives specialised training on one particular job. One of the purposes of this training is to promote the mobility of workers within the plant and within the industry generally.

Skilled Workers

In the training of skilled workers whether for laboratory tasks or for repair and maintenance or production, the major trends discerned in the programmes of training officially recognised in the various countries or applied by the various undertakings are towards a higher educational level of entry and a more comprehensive training with systematic basic training off the job and increased time for related instruction during the period of training in the laboratory or production unit.

The evolution of the classification of trades and occupations for training differs between countries. The most apparent development in the period of the past decade is, first of all, the recognition, in several countries, of two new skilled occupations as being of particular importance to the chemical industry, namely chemical process operator - in some countries referred to as chemical machine operator with a somewhat narrower choice of options - and a special trade of repair and maintenance mechanic for automated equipment.

At the laboratory level several countries, for instance Switzerland, have also established apprenticeable trades as chemical and physical laboratory assistants respectively with training periods ranging between three and four years.

A second trend discernable in most countries is to provide for broad basic training for youth in vocational training institutions or in vocational secondary schools or factory schools for a broader range of skilled occupations within the chemical industry.

These trends may be illustrated by the new craft as chemical process operator adopted as a recognised apprenticeable occupation by the United States Federal Committee on Apprenticeship. Training under this classification includes 324 hours of classroom studies in mathematics, physics (first year), chemistry and instrumentation (second year) and specific trade related instruction in the third year. A number of options for specialisation on the job is offered, but an apprentice must take three out of the following: materials handling, thermal cracking, steam generation, converter operation, power generation and distribution, reactor operation, water cooling and distribution, compressor operation, fractionation-distillation

and water treating. Each chemical process operator will consequently have a broad practical experience acquired on the job and thus be able to move between different tasks.[1]

In Sweden an employers' committee on "training for the occupations in the chemical industry" recently proposed that a special "process-technical" stream be introduced in the lower secondary school which would be a common trunk basic training for the various branches of the chemical industry, the pharmaceutical industry, the petrochemical industry and the chemico-technical industry. After the first year of basic training, some would go into industry for further training on the job as machine operatives. They would be entitled to return to a second year after practice on several different jobs as operatives in the chemical industry or could go straight from the first to the second year of the process technical stream with chemico-technical bias. After this second year, some students would go into industry for training on the job as process technicians or skilled chemical process operators; others would go on to a third year technician course to acquire junior technician level qualifications. There would be possibilities open for those who went into industry after the first or the second year to go back to a technical school or take correspondence courses to qualify for a technician level certifcate.[2]

In Poland, the training of skilled workers is normally given in vocational schools. The recruitment age is 15 years and 8 years of primary school. The duration of training for the chemical industry is three years. The last year is spent in an undertaking for on-the-job training and adaptation.

In France, the training for chemical machine operators and mechanics for automated equipment respectively takes three years and is given in secondary technical schools.

In Italy, a number of classes have recently been established in various secondary vocational schools for junior laboratory assistants and for maintenance mechanics for the chemical industry. In both cases, the training has a duration of three years and the trainees are recruited at the age of 14.

In most countries where the vocational training system is essentially based on apprenticeship, the number of options offered is normally fairly large. As an example, in the Federal Republic of Germany, one of the larger chemical undertakings (Hoechst) offers training within the undertaking for 18 skilled trades and occupations in production and 3 office occupations with a duration of training of 3 to 3 1/2 years. In the laboratory trades the level of entry is

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[1] Union Carbide Corporation, Chemicals and Plastics, Apprenticeship Standards for Chemical Process Operators, Texas City, Texas, July 1968.

[2] Svenska Arbetsgivareföreningens Allmänna Grupp, Utilbning för Kemiska Industrins Yrken, Stockholm, 1968.

normally middle-school examination (junior secondary school), while the recruitment level for the production trades is normally the end of primary education (14 to 15 years). The trainee normally spends the first six months in a special training establishment within the undertaking and receives the remainder of his training primarily on the job with related instruction (day release) for at least eight hours per week. In the office occupations the minimum level is junior secondary school and for the career streams, completed secondary school. All training is terminated by an officially recognised examination controlled by the chamber of industry and commerce concerned.[1]

Other larger undertakings, such as Bayer and BASF offer similar comprehensive programmes for training of apprentices within their works. An indication of the importance attached to training by these undertakings is that the BASF alone has a centre for vocational training with altogether 1,500 places, in which the apprentices undergo part of their training.

In the Federal Republic of Germany a total of seven skilled trades (with a training period of three to three-and-a-half years) are recognised specifically for the chemical industry. These include laboratory assistants, in biology and chemistry and in the manufacturing of paints, soap maker, materials tester and chemical process worker. The last mentioned is fairly recently included in the list of trades as is the trade of repair and maintenance mechanic (automated machinery) which is listed under the metal trades but has been adopted by the chemical industry to a large extent.

The two trades which have the largest number of apprentices registered are those of skilled process worker and skilled laboratory worker (chemistry). The syllabus of training for both these trades provides for three-and-a-half years of training in a wide range of basic functions in the respective fields of work and related instruction, on a day-release basis, in chemistry, physics, mathematics and other trade-related subjects.

The laboratory assistants (chemistry) should, for instance, carry out a series of standard tests and experiments, learn to maintain the various types of apparatus and equipment used in a laboratory and carry out the necessary mathematical calculations. The level of recruitment is normally completed junior secondary school (middle school examination). The syllabus allows for specialisation for chemical industry in general, petro-chemicals, iron and steel industry, etc. As a rule, half of the training is given in the undertaking and half in a vocational training institution.

In the Netherlands, the training of skilled chemical process operators is built on a syllabus of three years of training within an undertaking. It should be noted, however, that in the Netherlands a majority of trainees who go into apprenticeship have gone through a lower vocational school between the ages of 12 and 15, and that, consequently, the effective period of trainins is longer than

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[1] Farbwerke Hoechst A.G., Chemie hat Zukunft, Frankfurt-am-Main, 1963.

that indicated in the apprenticeship syllabus. Apprentice training includes related instruction on a day-release basis for eight hours a week, of which four hours are devoted to general further education and four hours to trade-related instruction. The apprenticeship is terminated by an examination (as is the case, for instance, in the Federal Republic of Germany) controlled, in the Netherlands, by a specialised foundation for the control of apprenticeship.

The general trend towards the establishment of a basic training period in a vocational training centre followed by training on the job may be illustrated also with reference to developments which are taking place in Switzerland. At CIBA, for instance, a new factory school was established in 1965 to provide training for skilled process workers, and for mechanics with various specialisations.

In Japan , an increasing number of undertakings have, in the past ten years, introduced programmes of training for skilled workers into their organisation. At the outset, the training programmes were normally fairly short and covered only a few occupations. They have in recent years increased both in numbers of classifications and in the period required for complete training.[1]

In the United Kingdom, the Chemical and Allied Industries Joint Industrial Council has recently adopted a scheme of training for qualified chemical operators and trained chemical operators as a national voluntary scheme for the training of young people and adults. Two certification levels - ordinary certificate and advanced certificate (lower technician level) - are provided for in the scheme which is based on a five-year apprenticeship with day release for at least two years of related instruction during six-and-a-half hours per week.

Technicians and Engineers

The changes which have taken place in the period covered by this report in the systems of training at technician and graduate engineer level would seem to relate, in the first instance, to the duration of training and to the numbers trained at the various levels. The systems as such seem to have undergone little change.

At the technician level, the long-standing trend to distinguish between junior technicians or technical assistants and senior technicians seems to be reinforced. Schemes for training junior technicians within the general system of education or of technical education have been introduced either as a period of basic training to be followed by training within the industry, or as a period of complete training to technician level qualifications in an educational institution.

Another notable trend seems to be towards opening of transfer possibilities from one stream of training to another so that junior technicians after a period of practical experience on the job may go

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[1] Japan Ammonium Sulphate Industry Association, Impact of Technological Change on Labour and Chemical Industry - Experience in the Recent Decade, Tokyo, 1966, pp. 66-70.

back to school or acquire qualifications at a higher level of technical education through correspondence courses or night classes. Also, in several countries, opportunities are open for higher technicians to qualify at the graduate engineer level.

At the higher technician level, three different systems are applied in the various countries - in some countries qualification as higher technician may be acquired in several different ways.

In the United Kingdom, for instance, a technician level certificate may be acquired through studies at a technical college, on a part-time basis, while the trainee serves as an apprentice in industry. Qualifications at a corresponding level may also be acquired at full-time technical colleges and through sandwich courses where part of the time is spent on full-time training in a college and part of the time on work in industry.

In the Federal Republic of Germany, training at technician level takes place in public and private technical colleges and is terminated by an examination controlled by the State. The requirements for entry are:

(a) completed apprenticeship as a laboratory assistant (chemical); or

(b) secondary education supplemented by a period of practice of at least two years; or

(c) completed junior secondary education and practical experience for at least two years in industry plus a special preparatory course for entry into a technical school.

The period of training is two years full-time or three to three-and-a-half years part-time (evening classes).

In France - as in the United States - training for higher technicians is placed at the post-secondary level and is given in specialised technical institutes. In both countries the normal level of recruitment is completed secondary school. Candidates with specially meritorious service in industry and particularly such with laboratory experience are often admitted as well. Parallel to this post-secondary training, training of technicians for various chemical specialisations also takes place in secondary school level technical colleges and through special courses by correspondence or in night classes.

It may be said that - at the technician level - there is a tendency to multiply the number of levels and the types of offerings in most countries. The range of training facilities and courses offered in this field is from two-year junior secondary school level for assistants and other lower technicians up to post-secondary or post-apprenticeship training of two to four years' duration. Some streams are highly specialised; others are more broadly covering chemical subjects, physics, bio-chemistry, chemical production methods, plastics, material testing, and mechanical/electrical engineering applied to the requirements of the chemical industry.

The great variety of offerings existing in this field would appear to be the effect of a number of factors - the great variety of needs of the industry itself; pressures within the school system for the establishment of technically biased courses at all levels; the desire to open roads for promotion and transfer lines from one level of education to another.

That the needs of industry have played a great role in this development is shown by the action taken, for instance, by the Japanese industry which in the past few years has established a number of industrial schools of specialisation. These schools often recruit at junior secondary level, provide three years of higher secondary level training in various specialisations of the chemical industry and often also a second level - of two years' duration - of a post-secondary character. These specialised industrial schools may be recognised by authorities as providing an education equivalent to that of the general schools.[1]

The training of graduate engineers for most branches of industry is given in special institutions for higher education or in the science and technology faculties of the universities. Also at this level the tendency is towards a prolongation of the studies which now vary between countries from three to six years. In this period is normally included a period of practical experience in industry which may be of six months' to one years' duration. The prolongation of the period of study may take the form either of an extension of the period required for the first degree or by larger numbers of students continuing their studies to a second or a higher degree before entering into employment.

Despite the efforts to provide an easier transfer through part-time studies for instance, from technician to graduate engineer level, the general trend, even in countries where part-time studies to graduate engineer level have been the rule in the past is towards qualification through full-time studies at university level specialised technical institution.

With regard to the contents of training at graduate engineer level, the trend in most countries is clearly towards broader basic training and a less marked specialisation in specific branches such as chemistry, at least during the first years of study. The options and also the compulsory courses during the first years of study at the technical university or institute tend to be broader and to include courses in mechanical, electrical and electronics engineering as well as training in the specialisations within chemistry.

In some countries, as for instance, in France, distinctions are being introduced between research streams and production streams in the third year of study at the institutes of technology.[2] The

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[1] HOSOYA, Toshio, L'istruzione media superior e l'istruzione tecnico-professionale, I problemi della pedagogia, Roma, Vol. 12, Special issue January-February 1966, pp. 56-77.

[2] Givaudon, la preparation des hommes aux métiers de la chimie, Jaune et rouge, Paris, Special issue 1966, p. 153.

variety of standards and methods of training even within particular countries is, however, such that it is difficult if at all possible, to determine clear-cut trends in the training of graduate staff beyond those indicated above.

Retraining, Updating and Training for Promotion

It is today generally recognised in the chemical industry, like in other fast-moving industries, that training is a continuing process throughout the working life of an individual. The old notion that all training needed could be acquired in the ages of youth is disappearing. As already shown in the previous part of this chapter, many courses of training to semi-skilled, skilled and higher levels which were previously reserved for young persons at the age levels of 14 to 20 are now made available also for adults entering the industry for the first time. Qualification at any level can in practice today in an increasing number of countries be achieved irrespective of the age of the person. The breakthrough of this general attitude towards training is most clearly identifiable at the semi-skilled and skilled worker levels but is found also at the levels of technician and even graduate engineers.

The reasons for this change in attitude are many and have, at least in part, been enumerated in the first two chapters of this report. Special attention may, in this connection, be drawn to the rapid changes taking place within the industry, both as regards products and production methods, the need for technical staff and workers at all levels to add new knowledge to what they previously knew, to change jobs more frequently than in the past and - as the rate of recruitment is comparatively low in most countries, particularly industrial ones - the need to provide for appropriate retraining and upgrading of existing staff within the industry.

It may be convenient, for the purposes of the discussion by the Committee, to make a distinction between three types of action relating to the training of workers who have already entered the industry, namely retraining, updating and training with a view to promotion.

Retraining is, in this connection, understood as an action by which a person is given new initial training for a job which is essentially different from any job he has had before. Updating relates to action which aims at adding knowledge and skill required by the individual worker, technician or engineer as the product range or the production processes are changed. Training with a view to promotion, finally, is used to characterise the various courses and training actions undertaken to give workers, technicians and engineering staff supplementary education to qualify for a post at a higher level in the hierarchy of occupations.

In the field of retraining a distinction should be made between action taken by the public authorities, for instance, within the framework of active manpower policies and prevention of unemployment, and training undertaken at the initiative of the industry itself, and mostly of the individual undertakings.

In the public systems of retraining there are few examples of arrangements made for training with a view to entry into the chemical industry. The few exceptions mostly relate either to action within the framework of decentralisation policies for industry where special efforts of a temporary character might be made for supplying trained

personnel for new industry in areas of unemployment and action taken under various programmes to facilitate the entry of underprivileged groups or persons who have been out of the employment market for some time (e.g. women) to find suitable employment.

Retraining courses organised by public authorities and being of interest to the chemical industry are run in several countries, notably in the United States and in the Scandinavian countries to facilitate the employment in the chemical industry, for instance, in laboratory work of handicapped personnel and of women returning into employment after their children have grown up. The training offered in such courses is normally an accelerated form of initial training covering, on the whole, the same subjects and skills as given in basic training courses for youth preparing for entry into the chemical industry. As many of the participants have previous work experience, the courses preparing for entry into the chemical industry may be shorter and the instruction more task-oriented than is normal in youth training.

While in the past such accelerated training often had a character of narrowly designed training for highly specialised semi-skilled jobs, the general trend in retraining in many countries is now to achieve the same level of qualification as given in other types and forms of initial training. When underprivileged groups are concerned, an additional purpose is often to broaden and develop the educational qualifications of the individual to make him fully accepted for work in the industry.

Another trend particularly evident in the revised Manpower Development and Training Act (MDTA) in the United States and the current application of the Industrial Training Act in the United Kingdom is to seek a direct participation and involvement of industry in the retraining of workers who have become redundant as a result of technical or economic change, or, for other reasons, wish to have training for entry into another type of work. The MDTA provides for a wide range of co-operative programmes for training within industry in which the chemical industry, together with others, takes an active part.

Under the MDTA federal and state support may be received for such retraining programmes within industry. In the United Kingdom training organised by industry qualifies for refunds under the levy/grant system which constitutes a fundamental part of the provisions of the Act.

Similar arrangements for public support to industry-based training has long been a central feature in the systems of technical and vocational education and training in the centrally planned economies of Eastern Europe where, particularly after the educational reforms of the late 1950s, industry's role in the implementation of the various programmes of technical and vocational education and training has been reinforced.

There can be no doubt, however, that the largest share in the retraining of workers is taken on by the chemical industry itself. These activities are seldom described in the literature or recorded in statistical data given over retraining activities and are, for these reasons, easily forgotten. Study of the courses run by any of the larger or middle-sized undertakings in the chemical industry shows clearly that retraining of workers who have to be shifted from

other jobs, constitutes a very large part of the total training effort of the undertakings. Action in this field ranges from complete initial and further retraining of staff at all levels for completely new factories to shorter ad hoc courses and on-the-job instruction of workers transferred from one job position to another, where the initial training requirements are the same for both the jobs, but an additional period of familiarisation and instruction is needed.

Also updating includes such a wide range of activities by individuals employed in the chemical industry, by undertakings and by employers' and workers' organisations and educational institutions that it is not possible to suggest a systematic classification of such action. They range from "ad hoc" instruction on the job at all levels to long-term courses for workers, technicians and other technical staff and for management in particular techniques which are introduced in the industry. The trends are clear however. There has been a tremendous increase in such action on the part of all those referred to in the recent past. As one single example, the Du Pont Organisation in the United States and Canada has developed an extensive programme of updating based on a comprehensive library of programmed manuals and courses. This library covers a large variety of subjects and since its start in 1959, around 100 courses have been written up and successfully used. In the short period of seven years, altogether 15,000 employees of the companies had taken an average of three courses each within the framework of this programme.[1]

A second trend in this field would seem to be towards more comprehensive and more technically biased courses than those current in the 1950s. The chemical industry in the USSR, for instance, organises a whole range of courses on production techniques having a duration of three to six months of part-time tuition at the levels of technician and engineers. Emphasis is on updating technical staff in mathematics, cybernectics, applied to the chemical industry, the use of electronics and new problems at the borderline between physics and chemistry, radiation in chemistry and other similar technical subjects. Such courses are offered in addition to, or as a complement to, the traditional further training courses for technical staff in such matters as the organisation of work, cost control and costing in production and other management techniques.[2] Similar lists of recent course offerings could be taken from practically any of the countries where the chemical industry is well developed.

The rapidly increasing demand within the chemical industry for technically competent lead workers, foremen and staff in technical supervisory positions in research, production, laboratory work, maintenance and production has been the reason why many undertakings, employers' organisations and educational institutions have organised a broad range of training courses at all levels to permit upgrading of their workers.

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[1] Simons, Industrial Training, Textile Journal, Montreal, 9 December 1966, pp. 60-63.

[2] Trade Union's International of Chemical, Oil and Allied Workers: International Seminar on Vocational Training and Further Training, Berlin, 23-25 November 1967, ICPS Information Bulletin, January/February 1968.

The new trends in this field, as in updating, are towards longer courses than previously with a more comprehensive technical content. Upgrading is also provided at more levels of work than in the past. A special problem in this connection has been that rapid educational development, through compulsory or voluntary prolongation of schooling, has placed the adults in an educationally inferior position compared to the younger and better educated recruits into the industry.

Some schools and adult training systems have taken action to help the chemical industry to solve these problems. In France, for instance, the government-sponsored adult training system, AFPA, offers courses at a "second level" (the first level being mainly initial training for those seeking new employment) for workers in industry to acquire recognised qualifications as specialists in production or laboratory work at skilled worker or lower technician level. The extension services and evening class programmes of many technical and vocational education and training institutions and universities also offer complementary courses for workers and other technical staff to permit them to attain higher level qualifications.

Many undertakings and industrial organisations have found, however, that they cannot, as was often the case in the past, rely primarily on the initiative of the individual to take care of the needs for promotion within the undertaking. It has, for this reason, become current practice, at least in the larger undertakings, to establish comprehensive upgrading plans for selected workers, technicians and engineers who have shown career potentials and to make appropriate arrangements for their systematic further training.

This is particularly evident at three levels: the upgrading of semi-skilled production workers to become skilled process operators; the training of skilled workers to become instructors and foremen; and the training of intermediate staff to attain higher positions.

Much training for promotion takes place within the plants in an informal manner by rotation to different jobs which have an experience value for promotion purposes. Semi-skilled workers with experience only in production are attached to maintenance teams to broaden their understanding of the functioning of plant and equipment or trained on a "second" job to increase both their mobility and their promotion prospects. Skilled workers are used as instructors or trained as testers or materials controllers as one step towards assuming supervisory control over a unit or shift. Engineers and technicians are rotated to various posts in production, pilot production experimentation and maintenance to serve as assistants to the managers to acquire broader knowledge of the various functions within chemical production in preparing for promotion.

Such rotation between jobs has always taken place in chemical production, where, in the past, there were often traditional career ladders built on seniority and broadness of experience with steps from junior helper through helper jobs, process attendant, machine conductor to assistant shift foreman, foreman and superintendent of a production unit.

In the 1950s the traditional career ladders began to become insufficient as a basis for promotion in many parts of the chemical industry. At first, action in most undertakings seems to have been directed towards providing for additional training of workers to

become foremen. Such training was first, in many cases, focused on the supervisory and managerial functions which were identified as the principal differences between a worker's and a foreman's tasks. Special training programmes were organised by the undertakings in the industry, by employers' organisations and, in some countries, by the public authorities to provide initial and further training for potential and existing foremen in functions of leadership, organisation of work, rate setting techniques and other functions of supervision. At the outset many of these courses were arranged on an inter-industry basis. The TWI Job Instruction, Job Relations and Job Methods, later also Job Safety programmes, for instance, were run on the basis of standard manuals used with slight adaptations in both the chemical and other industries. The chemical industries in the Scandinavian countries took an active part in the establishment of the special foreman training institutes existing in Denmark, Finaland, Norway and Sweden, which provide general foremanship courses for potential and existing supervisors in all industries.

Similarly, the employers of the chemical industry in the Federal Republic of Germany began, in 1955, a series of courses and conferences primarily concerned with the place of the chemical industry in the economy, the roles of employers' and workers' organisations, labour legislation as applicable to the industry, the functions of a supervisor in chemical production and the principal techniques of supervision. As a measure of the degree of acceptance of this type of training, it may be mentioned that some 3,300 supervisors and managers from 165 undertakings had taken part in the 100-odd courses and seminars organised by the Association of Employers in the Chemical Industry between 1955 and 1965.[1]

In line with the general trend in all training for the chemical industry the tendency in the recent past in most countries has been to place increasing emphasis in the training of supervisors on the technical aspects of their work. The Swedish employers, for instance, have recommended long-term planning of training for promotion in the chemical industry along the lines shown in the table. The distinction made between youth and adults has its explanation in the change in the educational system which has taken place in the past two decades and which essentially, provides for a prolongation of primary education.[2]

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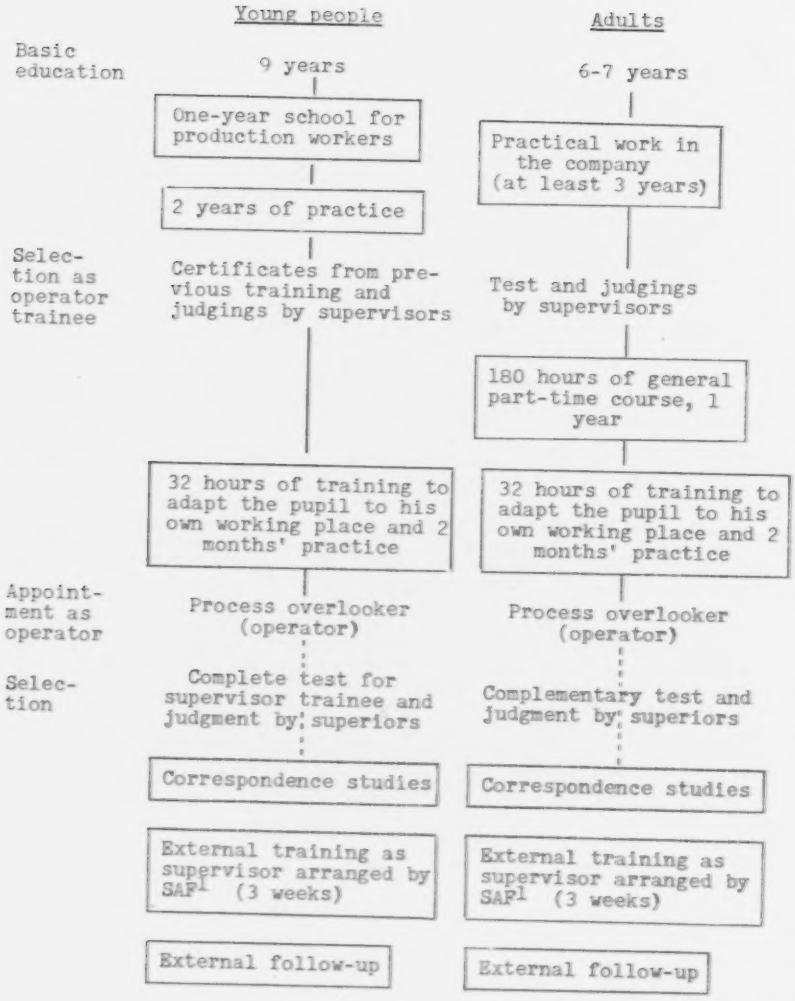
[1] Arbeitsring der Arbeitsgeberverbände der Deutschen Chemischen Industrie: Fortbildung und Information, Wiesbaden, 1965, 35 p.

[2] The General Group of the Swedish Employers' Confederation: Vocational Training in Swedish Chemical Industry, preparatory document, Stockholm 1967, p. 14.



[1] SAF = The Swedish Employers' Confederation.

Similarly, in Italy, long-term courses of training for potential supervisors have been organised for the chemical industry. For admission into the courses, candidates for such training should give evidence of good knowledge of the work processes, job safety measures and regulations, equipment and materials and of the organisation of work within their undertaking. They are also tested for their general knowledge and aptitudes with regard to oral and written communication, manners and organisational ability. The courses are works based and cover a total of some 500 hours of practical instruction by rotation to various departments and some 500 hours of additional trade-related instruction and further general education.[1]

The increasing emphasis in the United Kingdom and in the USSR and other countries in Eastern Europe on further training of workers in industry are other examples of the concern on the part of the chemical industry for raising the general level of technical competence of the supervisors and other intermediate technical staff.[2]

Within the larger undertakings extensive arrangements are normally made for a systematic follow-up of recruits with career prospects. The training programmes designed for these often differ between the various units but the general trend is the same as that described above: rotation to different types of work, familiarisation with company policies and practices, intensive additional technical, practical and theoretical training for potential foremen and managers in all fields of work including research, materials and products testing and control, production and marketing.[3]

Methods of Training

It is in the very nature of chemical production that training of workers, supervisors and other production personnel will largely have to take place on the job. The trend towards broader basic training of a multidisciplinary character and the "closed in" nature of much modern chemical production has been the reason why an increasing part of initial training has to be given in special centres and

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[1] Focaccetti, Esperienze nella formazione professionale degli adetti all' industria chimica, Formazione e Lavoro, Roma, No. 10, November/December 1964, p. 51.

[2] See for instance: Chemical and Allied Industries Joint Industrial Council, A Career in Chemicals, London, 1965 and National Economic Development Office, Manpower in the Chemical Industry op. cit.

The statements on trends in the countries of Eastern Europe are based on an analysis of the training regulations issued by the various technical authorities responsible for the supply of manpower to the chemical industry and for an arrangement for training for promotion in these.

[3] See for instance: Du Pont de Nemours and Company, Inc., Employee Relations Department, Personnel Development Division, Personnel Development within the Du Pont Company, Wilmington, Del. (undated) 31 p.

schools in which the chemical processes can be explained in laboratory conditions. Repair and maintenance workers are, to a diminishing extent, trained exclusively on the job as the equipment is too expensive and the production processes too sensitive for allowing trainees to work directly on productive plants.

Where such basic and initial training is not provided within the national educational system (as, for instance, in France and Sweden), the trend is that the undertakings themselves, alone or in co-operation with other firms establish their own factory-based training centres for basic and further training of operatives, and for the various trades in repair, maintenance and construction of new plants such as plumbers, welders, mechanics, electronics specialists, etc. In Czechoslovakia, Hungary and the USSR, for instance, training centres are normally attached to each major plant in the chemical industry and the factories also have arrangements for close technical and pedagogical co-operation with the local and regional, general and technical schools and universities for sandwich training of trainees to provide opportunities for practical production experience for students and to cater for the further training needs of the technical personnel of the industry.

Parallel to the increasing cost of installations, equipment and machines per worker employed, means are devised in many schools and training centres to provide initial training for various functions in production and maintenance by the use of simulators, process-type models and other equipment specifically designed for training purposes. This is a general trend, which finds its application both within the general technical schools and universities and in the factory-based training centres. Methodologically sheer laboratory experiments are no more enough as a training device as the process in mass producing plants becomes increasingly sophisticated. At the same time the possibilities for training directly on the job are decreasing and an adequate alternative must consequently be found.

CHAPTER IV

THE ADMINISTRATION OF TRAINING AND RETRAINING

Two general trends may be suggested as typical features in the organisation and administration of technical and vocational education and training, including retraining in the recent past. One is towards a more extensive support on the part of public authorities to technical education and vocational training in all its forms, parallel to a certain increase in public control of the standards of training in industry. Another is towards an increased concern on the part of both employers and workers with the development of methods, facilities and standards of training.

The chemical industry is only one of many branches of industry which are the subjects of an over-all trend towards a revision of the various apprenticeship acts and other regulations applying to training in and for industry - new or revised acts and regulations of the systems of technical education and vocational training have been introduced or proposed in practically all countries in which there is a chemical industry.[1]

In practically all countries direct co-operation with industry is now being sought by the authorities responsible for the systems of education and training in the administration of training and retraining at national, regional, as well as local levels. As illustrated by the provisions of the Industrial Training Acts in the United Kingdom, more and more countries are establishing bodies which, at the national level, bring educationists together with representatives of industry - both employers and workers. In some countries, where industry is small, these bodies often deal with the whole complex of technical and vocational education and training or there are separate bodies dealing with technical education and vocational training respectively. As industry grows and practically everywhere in the industrial countries the trend is to organise the national policy-making organs at two levels: one central organisation for over-all co-ordination and

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[1] New apprenticeship legislation has, for instance, been adopted in India, the Netherlands and Switzerland over the past few years. Basic structural reforms in the systems of technical and vocational education and training have been introduced, for instance, in Czechoslovakia, France, Hungary, Poland, Sweden, the UAR, the United Kingdom and the USSR during the same period. Similar reforms are being prepared and discussed, for instance, in Austria, and the Federal Republic of Germany. In the technical co-operation activities of the ILO, there is a general trend towards an increased demand for assistance in the reorganisation of the over-all training systems, the establishment of national vocational training organisations and the improvement and expansion of training within the various branches of industry. Important changes in the systems of retraining and further training have been introduced, for instance, in France, Sweden and the United States, all involving extended support to and co-operation with industry in the organisation and administration of various retraining schemes.

separate bodies, sometimes enjoying a quite considerable degree of independence, for each particular branch of industry and of other fields of economic activity.

At both international and national levels employers' and workers' organisations are taking an increased interest in improving and developing the systems of training and retraining in the chemical industry. In the past few years several major conferences have been organised by international organisations of employers and of workers to study and discuss methods and standards of training in the chemical industry.[1]

There is an increasingly close co-operation between the national organisations of employers and workers in the administration of training within the industry. In Sweden, for instance, a national bipartite board has been established on the basis of an agreement between the employers and workers of the chemical and allied industries. The board is primarily concerned with the relations between the training needs of the industry and action taken by the authorities and with the development of voluntary training action within the industry itself. It further deals with the training of officers and instructors in industry and of training stewards appointed by the unions in each factory.

Within the undertakings the training function is given an increasingly important role within the management structure. As previously stated, most larger undertakings have established special training departments with over-all administrative and co-ordinatory functions - direct responsibility for the administration and implementation of training schemes is normally delegated to factory or plant levels. The central training departments are also often taking care of relations with educational institutions and the national training authorities and are setting company-wide standards for, for instance, management and supervisory development programmes.

Many of these programmes are applied on an international basis and companies which operate in more than one country mostly provide for training abroad at all levels when this is found desirable, for instance, in connection with the building of new production façilities or the introduction of major technical changes. Some of these companies have special schools or training centres in which specialised personnel from one or several countries receive such training which cannot be economically arranged at the factory level.

Reference has already been made to the over-all trend towards the establishment of factory schools and special plant training facilities in most larger production units of the industry.

In this general development, the smaller undertakings often find it difficult to make adequate arrangements for the training

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[1] For instance: the chemical industry employers in the Common Market countries held a major conference on this subject at Wiesbaden in 1966. A similar conference was organised by the Trade Unions International of Chemical, Oil and Allied Workers, Berlin in 1967.

and retraining of their staff. In some countries, the special needs of the smaller companies are taken care of by inter-enterprise schools - special provisions for the establishment of such schools and training centres are included in, for instance, the regulations for the administration of training in France and in the United Kingdom. In other countries employers organisations and federations of the chemical industry have taken the initiative to establish their own training facilities as a service to their members or have made special arrangements with, for instance, technical colleges to provide such courses as are needed for personnel development in the smaller plants. It may be suggested, however, that, on the whole and particularly in the developing countries, the smaller and even middle-sized undertakings do not have sufficient training services at their disposal, unless they can make use of the facilities of larger undertakings with which they may have technical agreements.

CHAPTER V

SUGGESTED POINTS FOR DISCUSSION

As shown in the preceding four chapters, there are a number of problems relating to the training and retraining of workers, technicians and engineers in the chemical industry. This session of the Committee should provide an opportunity for representations of the industry from a number of countries to express their views and exchange experience to develop improved practices in this field. In doing so, the Committee may wish to bear in mind the special requirements of foreign workers and the brain drain problem of developing countries not specifically covered in the text of the report. The points below are proposed as a possible basis of discussion. The Committee is, of course, free to make such changes in the list of questions as it may consider desirable.

1. General trends of importance to the development of training and retraining in the chemical industry for:

(a) process workers;

(b) repair and maintenance personnel;

(c) laboratory workers;

(i) in research

(ii) in production;

(d) technicians and engineers.

2. Needs for change in the training of process and maintenance workers in chemical production (including needs for new skilled and highly skilled occupational classifications):

(a) basic training;

(b) further initial training;

3. Needs for change in the initial technical education and vocational training of technicians and engineers at various levels for research, production control and process supervision:

(a) in developing countries;

(b) in industrial countries.

4. Needs for development of improved forms of retraining (including updating and training for promotion):

(a) production workers;

(b) maintenance staff;

(c) supervisors in production;

(d) research and production laboratory personnel for routine operations;

(e) technicians and engineers in:

(i) research and product development;

(ii) production and process control;

(iii) process development (design of new production and methods and equipment).

5. Trends and requirements with regard to:

(a) national organisation of technical and vocational education and training, including participation of employers and workers in the central standard setting and supervisory bodies;

(b) co-operation between employers and workers in the organisation and administration of training:

(i) at industry level;

(ii) at company and plant level.

6. Facilities and action, including ILO technical co-operation, required by developing countries to build up the necessary structure of skilled personnel needed by the chemical industry.

VT 017 551
K-12 CAREER EDUCATION PROGRAMS.

WARREN CITY SCHOOLS, OHIO.
OHIO STATE DEPT. OF EDUCATION, COLUMBUS.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - ND 18P.

DESCRIPTORS - ELEMENTARY GRADES; SECONDARY GRADES; *CAREER EDUCATION; VOCATIONAL DEVELOPMENT; *CITY WIDE PROGRAMS; URBAN AREAS; BEHAVIORAL OBJECTIVES; *CONCEPTUAL SCHEMES; GOAL ORIENTATION; *PROGRAM DESIGN; *FUSED CURRICULUM; INSERVICE EDUCATION; COMMUNITY INVOLVEMENT; OCCUPATIONAL GUIDANCE; FAMILY INVOLVEMENT
IDENTIFIERS - CAREER MOTIVATION; CAREER ORIENTATION; CAREER EXPLORATION

ABSTRACT - THE OBJECTIVES OF THIS CAREER DEVELOPMENT PROGRAM FOR A FUSED CURRICULUM FOR KINDERGARTEN THROUGH GRADE 10 IN THE WARREN CITY SCHOOLS FOCUS ON THE VALUE OF WORK AND THE IMPORTANCE OF THE INDIVIDUAL TO HIMSELF, TO HIS COMMUNITY AND TO SOCIETY AT LARGE. CAREER MOTIVATION, CAREER ORIENTATION, AND CAREER EXPLORATION CONSTITUTE THE PROGRAM EMPHASES IN KINDERGARTEN TO GRADE 6, GRADES 7 AND 8, AND GRADES 9 AND 10, RESPECTIVELY. AN OVERVIEW OF THE PROGRAM INCLUDES: (1) THE AMOUNT OF PROGRAM FUNDS REQUESTED, (2) A LIST OF PROGRAM PERSONNEL AND FACILITIES NEEDED, (3) A CONCEPTUAL FRAMEWORK FOR THE PROGRAM, (4) AN OUTLINE OF CONTEMPORARY ISSUES RELEVANT TO VOCATIONAL DEVELOPMENT, (5) THE PROGRAM'S TIME ALLOTMENTS, (6) A LIST OF INSERVICE ACTIVITIES, (7) AN EXPLANATION OF THE PROGRAM DESIGN FOR EACH GRADE LEVEL, AND (8) SYNOPSES FOR EACH OF THE THREE PROGRAM SECTIONS. (AG)

VT 017 551

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
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Title of Program or Project:	K-10 Career Education Programs
Applicant Organization:	Warren City Schools
Initiator: Director, Career Education	Robert J. Williams Director Career Education 261 Monroe Street, Northwest Warren, Ohio 44482 Phone: (216) 841-2315
Project Director: Coordinator, World of Work	Michael A. Zockle, Coordinator World of Work K-10 261 Monroe Street, Northwest Warren, Ohio 44482 Phone: (216) 841-2260
Transmitted by: Superintendent	Dr. Richard Boyd, Superintendent Warren City Schools 261 Monroe Street, Northwest Warren, Ohio 44482 Phone: (216) 841-2310
Duration of Activity:	July 1, 1971-June 30, 1972
Purpose of Grant or Contract:	Career Education Programs K-6 Career Motivation 7-8 Career Orientation 9-10 Career Exploration
Use of Funds:	All fund categories to implement K-10 Career Education Programs Career Exploration - Western Reserve Career Orientation - West Career Motivation - Elm Road - First Street - Horace Mann - Jefferson - Washington - Willard
Total State Funds Requested:	K-6 $44,500.00 7-8 21,000.00 9-10 36,000.00 $101,500.00

VT017551

NARRATIVE

The Warren City's Career Development program spans the K-10 continuum. In the Warren City Schools, there are two comprehensive high schools, one special education high school, three junior high schools and eighteen elementary schools. There is a total of 4,254 senior high students, 2,265 junior high school students and 7,669 elementary students totaling 14,188 in the school system. The career education program is presently in one high school, 1,200, 9-10th grade students; one junior high school, 804, 6-7-8th grade students; and six elementary schools, 2,710, K-6 students. The grand total of participation is 4,714 (33.2%) in K-10.

Late in 1969 the Warren School system submitted a proposal stating that: in urban centers, there are a considerable number of elementary school age disadvantaged youngsters who, because lack of information and motivation concerning the world of work, are unable to set realistic educational and occupational goals. It was presumed that the problem stemmed mainly from the fact that the parents of many of these students also lack this necessary understanding and are therefore not able to offer the needed guidance.

After the first grant and experimentation, the advisory committee still felt the original premise held true. However in their investigation they felt that elementary youth, from other than disadvantaged areas, seem to have similar problems. They felt that the implementation of a career development program which enables them to see the wide world community and the participant in society. The project is designed to not only show the pre-requisite for a job but to show that all work is honorable and that every person should have pride no matter what his role. The intent of the program is to answer three inquiries of youth--"Where am I going?" --"How do I fit in?"--"Will I make it?"

Thus, the aim of the school is to provide a K-10 curriculum, in career development, to overcome the problem by providing motivational, orientational, and explorational experiences for the youth in the school community.

The objectives of the program therefore can be stated as follows:

1. The student will improve his knowledge of himself and learn that he is important. (K-6 emphasis) (7-8 and 9-10 re-enforce)

2. The student will improve his knowledge of his environment and know ways that he can contribute to home, school and community. (K-6 emphasis)

3. The student will have experiential opportunities to synthesize his self and his environment. (K-10)

4. As a result of participating in this program, their parents, and teachers will acquire a new attitude toward all education including vocational education. (K-10)

5. More interaction activities will be planned with the home, school and community to establish a closer relationship. (K-10)

6. That all the youth in career motivation programs will continue into career orientation and career exploration programs offering a full K-10 continuum.

ELEMENTARY CAREER MOTIVATION

The initial program of the K-6 Career Motivation involved four elementary schools. The second year, 1971-72, involved two additional schools.

1. Elm Road.....K - 62.....1st-6th -337
2. First Street School.....K - 64.....1st-6th -461
3. Jefferson School.....K - 61.....1st-6th -442
4. Horace Mann School.....K - 67.....1st-6th -537
5. Washington School.....K - 32.....1st-6th -242
6. Willard School.....K-- 43.....1st-6th -362

Total.....K - 329....1st-6th -2381

Total..... K-6 - 2710

Total Reimbursement.....$44,500.00

JUNIOR HIGH CAREER ORIENTATION

The initial program of Career Orientation 1971-72 involved one school. To complete the set, another Junior High school program must be initiated.

West Junior High.....6th-7th-8th - 804

Total Enrollment.....804

Total Reimbursement.....$21,000.00

HIGH SCHOOL CAREER EXPLORATION

The initial program from Western Reserve School was initiated at the start of the 1971-72 school year.

Western Reserve High School.....1,200

Total Enrollment.....1,200

Reimbursement requested.....$36,000.00

Total Reimbursement Requested.....$101,500.00

PERSONNEL REQUIRED TO OPERATE K-10 CAREER DEVELOPMENT SET

The following personnel was required to carry out the duties necessary for K-10 career program:

K-10 - Career Development Coordinator (42 weeks full time).....1
K-6 - Career Motivation Specialists (part time 210 hrs.) 6
7-8 - Career Orientation Specialist (full time 40 weeks -1/2 time at each school.....1
9-10 - Career Exploration Specialist (full time 40 weeks).....1
K-6 - Instructional Aides (25 hours per week - 34 weeks).....2
K-10 - Secretary (full time 42 weeks).....1

The following facilities have been used by the personnel provided by the Warren City Board of Education.

A central Career Development office, which also includes a central media center for Career Development. There is desk space provided for Coordinator, Secretary and two Instructional Aides.

One Career Exploration office and Media Center, located at Western Reserve High School.

One Career Orientation office and Media Center located at the West Junior High School.

The Elementary Career Specialists use their designated rooms for articulation of their programs. Their rooms have provisions for an elementary Career Media Center, where feasible.

All Career Specialists are provided with phones.

PUPIL IN RELATION TO HIS FAMILY

PRIMARY:

Kindergarten:

First:

Second:

The child develops an awareness as performed in his home and the responsibilities of the family within the home, stressing interdependence and time and work schedules as it related to work. This awareness will develop showing that there are many jobs from which families can earn a living.

PUPIL IN RELATION TO HIS FAMILY AND THE PEOPLE WHO SERVE HIS [illegible].

INTERMEDIATE:

Third:

Fourth:

The child develops a self concept and learns that all worthwhile work has dignity. What they do in school will influence what they will do occupationally in later life. They will see the community at work as it relates to the production of goods and services which comes to their homes.

PUPIL IN RELATION TO PEOPLE AS A HUMAN RESOURCE

UPPER ELEMENTARY:

Fifth:

Sixth:

The child learns that all in industry who do a conscientious job contribute to the final product or service of the wider inter-dependent world community. They further identify with the people who are working for a living and see that a career choice is a right that citizens enjoy in the American system.

THE STUDENT ORIENTATION AND RELATIONS TO OCCUPATIONAL PATTERNS AND VALUES.

JUNIOR HIGH:

Seventh:

Eighth:

The student develops a concept of a work group and sees the role the worker plays in this group. He sees the dynamics of complex organizations and human relationships. He sees himself in relation to industry and to his community.

THE STUDENT EXPLORES IN RELATION TO HIS INTEREST AND ABILITIES, AIMING TO MATCH THEM WITH HIS FUTURE PLACE IN SOCIETY.

SENIOR HIGH:

Ninth:

Tenth:

The student through his knowledge of his self, his responsibilities, and his environment knows that all work is necessary to keep the world microcosm in balance. He uses the decision making process and aims to project his self in a work group, understanding that his skills in a work-role will serve to cope with the many situations in everyday life.

WARREN CITY
WORLD OF WORK
FRAMEWORK

CONCEPTS

TOPICS	WORLD OF WORK 100% --I--D--E SELF & ENVIRON.	EDUCA. & TRAINING	ECONOMICS	EMP. & WORK ADJ. SKILLS	DECISION MAKING
1. Comparative Advantage	60%	5%	10%	10%	15%
2. Competition and Cooperation					
3. Compromise, Adjustment, & Interaction	I	I	I	I	I
4. Conflict	.	.	.	.	.
5. Culture and Institution	.	.	.	.	.
6. Habitat and Its Significance	D	D	.	.	D
7. The Industrialization-Urbanization Syndrome	.	.	.	.	.
8. Input and Output	.	.	.	.	.
9. Interdependence	E				E
10. Modified Market Economy					
11. Morality and Choice					
12. Power					
13. Saving					
14. Scarcity					
15. Secularization					
16. Social Change & Social Control					
17. Sovereignty					
18. Dignity					
19. Empathy					
20. Loyalty					
21. Freedom & Equality					

The concept areas will have assurance of being fully developed through the use of the vertical topic listings. The Topics will fit better in some subject areas than others.

CODING

K Thru 6
I - Introduce
D - Develop
E - Emphasize

* Note - K-6 in the Warren City's Schools are self contained. All subject areas should flow together. The program will devote 270 hours or more in the fused curriculum as stated in approximate percentages above. Each class shall have at minimum of 1½ trips per year and 3 speakers.

Career Orientation 7-8

SCOPE: CONTEMPORARY ISSUES APPROACH

The personnel of the Warren City Schools knows that the family of agencies must function as a unit in serving the common issues of improving community living. The school, through the contemporary issues approach, will attempt, along with the community, to identify the community occupational outlook as well as the wider world outlook. The scope of the program is flexible enough so that any teacher, in any curriculum area, with the help of the career specialist, can facilitate the realization of the program purpose. The program Scope makes full use of all community resources for learning experiences. As time and problems change, the school shall provide distinctive types of materials and aids which shall relate to the issues of the times. The contemporary issues approach must constantly provide teacher education to meet the purposes consistent with the times.

Only a pattern of organization is set forth in the Scope. The detail of planning within the curriculum must come from the teacher, and be designed by him, to serve the interests of his students.

I. Critical Social and Personal Issues and the School

A. Orientation to school and the school's function

1. Occupations in the school
2. Responsibility of the school
3. Transition from junior high to high school
4. Transition from senior high to adult responsibilities
5. Learning how to learn

B. Orientation and Process studies of the modern community

1. The home and community
2. How institutions help individuals, what they are, and what they do.

C. Survey of occupations

II. Contemporary community issues - occupations and the related curriculum

A. How can we improve on and who is responsible for:

1. Control of infection
2. Health - personal grooming
3. Home and friends
4. Recreation
5. Traffic control
6. Crime and prevention
7. Advertising and effects
8. Fads and fallacies
9. City government
10. Consumer problems
11. Propaganda
12. Stimulants and narcotics
13. Environmental problems

1803

14. Interracial problems
15. Mental and emotional health
16. Investments
17. Self analysis
18. Economic and social well-being
19. Ethics in business, government, personal affairs
20. War and change
21. Public health
22. Child labor and labor laws
23. Labor organizations
24. Public education
25. Ideological conflicts
    a. Declaration of Independence
    b. Bill of Rights
    c. Religions
26. Political
    a. Campaigns
    b. Public figures
    c. Social leaders
    d. Political parties
27. Industrial
28. Transportation
29. Eulogies of self-made man
30. Equal opportunity for race, sex (occupational rights)
31. Machinery and man
32. Labor and capital
33. Human relations
34. Risks and responsibilities of management
35. Profits
36. Employers' needs
37. Employee's willingness to contribute to future
38. Changing conditions and their effects on employers and employees
39. Evolution and industrialization understanding
40. Personal responsibility in workers toward world improvement
41. Attitude of willingness to grow in understanding and knowledge

B. How do these apply and who is responsible for:

1. Drives - Boy Scouts, Red Cross, United Appeal
2. School - games, tickets, editorials, advertising
3. Church - teaching, preaching, social
4. Leading Citizens - mayor, police, businessmen, "town boss", social leaders

GENERAL UNIT RELATED TO CONTEMPORARY ISSUES

I. Aims

A. To identify as many as possible occupations which are concerned with a particular contemporary issue.
B. To collect informations about occupations which will be useful when a decision has to be made concerning future vocational plans.
C. To become involved in relating occupations to regular classroom subjects.

1804

D. To observe individuals at their work.
E. To develop the attitude that all honest work has dignity and importance.

II. Content Information

A. Selection of a career is probably one of the most important decisions a person makes in a lifetime. Yet the amount of research that that person does is often negligible. Lesser decisions are often better researched, such as buying a car.
B. The occupation of an individual often determines his life style.
C. Studies show that many people are unhappy in their chosen vocation, and would change it if given a chance to do it over.
D. "...vocational choice is a process rather than a single event; that it takes place over a period of years; that it usually begins with knowledge of one's abilities, attitudes, interests, and achievements; and that there is a crystallization of this concept into a self-concept."
E. Future occupational needs vary and change; therefore, educational programs should reflect those needs now and in the future.

III. Activities

A. Decide on a contemporary issue through investigation and interests, needs of students felt by the teacher, or a combination of both.
B. Use cassettes and/or filmstrips on introduction to careers.
C. Determine the occupations involved in that issue by class discussion, library assignment, individual research in Career Orientation Media Center, collect newspaper articles which mention occupations in that contemporary issue, ask parents or members of the CO Advisory Committee.
D. Determine which occupations should be investigated by the class as a whole, individually, or by committee.
E. Determine methods to use in researching the occupations; speakers and their names, if known; reading assignments; field trips where a number of occupations concerned with that issue can be observed; interviews with workers on cassette tapes; simulated experiences; make bulletin boards; use audio-visual aids in CO Media Center, school Material Center, city A.-V. Center.

PARENT AND COMMUNITY INVOLVEMENT

Members of various factions in the community, such as business, industry, education, cultural, and parents of students serve as advisors to give aim and direction in career orientation. They recommend activities designed to expand the students' knowledge of career possibilities in the community and outside of it. They participate in, and help plan, opportunities for students to be exposed to a wide range of occupations.

AREAS WHICH WILL CONCENTRATE ON THE CLUSTERS OF OCCUPATIONS ARE:

[a] Agri-Business and Natural Resources - Science, Mathematics, Home Economics
[b] Business and Office Education - Mathematics, English, Science
[c] Communication and Media - English, Social Studies, Science, Music, Art
[d] Consumer and Homemaking-related occupations - Home Economics, Mathematics, Industrial Arts, Social Studies

[e] Construction - Industrial Arts, Home Economics, Art, Mathematics, Science
[f] Environment - Science, Social Studies, Art
[g] Fine Arts and Humanities - Art, Music, English, Home Economics, Industrial Arts, Social Studies
[h] Health - Science, Physical Education, Home Economics, Mathematics
[i] Hospitality and Recreation - Home Economics, Physical Education, Art,Music, Industrial Arts
[j] Manufacturing - Mathematics, Industrial Arts, Science, Home Economics
[k] Marine Science occupations - Science, Mathematics, Social Studies
[l] Marketing and Distribution occupations - Mathematics, Social Studies, Home Economics, Industrial Arts
[m] Personal Services - Social Studies, Industrial Arts, Home Economics, English, Science
[n] Public Service - Social Studies, Science, English, Mathematics
[o] Transportation - Social Studies, Science, Mathematics, Industrial Arts

TIME SCHEDULE

For the most part, all Career Orientation activities are an integrated part of the classroom experiences, except for a general unit in the study of occupations in Social Studies and administering the Ovis. The teachers use a combination of vicarious, simulated, and "hands-on" activities, using community members, parents, field trips, audio-visual aids, videotapes, written materials, and materials produced by the students.

ACTIVITY	HOURS
10 per student per year.....Speakers	20
5 per student per year, 3 1/2 hrs. Field trips	35
Preparation for trip or speaker, 3 hrs.	90
Home economics and Industrial Arts -50% of time Career-Orientation based including "hands-on" experiences	70
One hour in counselor-led career orientation and work adjustment class	38
4 weeks in general unit on study of occupations in Social Studies classes	20
Outside research on 15 USOE clusters in individual interests (1/2 hr. per week)	38
Testing	5
Integrated classroom contemporary issues occupations approx. 9 min. per major subject area per day	224
	540

CAREER EXPLORATION

Career days must be every day in the modern comprehensive high school. Youth must experiment in ways in which they will some day spend their work lives and serve humanity so that their all important career decisions can be made with deeper perception.

The Western Reserve High School attempts to bring to the ninth and tenth grade students, a program of career exploration through the following nine designs. Allocating the following amount of manhours to each Design.

Design I	Manhours,	13,050	-- Career Exploring Vocational Education
Design II	Manhours,	240	-- Career Exploring Units and Organizations
Design III	Manhours,	11,760	-- Achieving Your Career
Design IV	Manhours,	1,440	-- Career Media Center
Design V	Manhours,	5,400	-- Techniques and Success and Career Exploration
Design VI	Manhours,	2,700	-- Career Tours and Speakers (a course
Design VII	Manhours	49,846	-- Integrated Approach
Design VIII	Manhours,	1,200	-- Career Exploration Specialist
Design IX	Manhours,	14,400	-- Explorations (3 per Student)
All Designs		100,036	

61,964 integrated class instruction in the various subject fields. This would be less than one hour of career instruction for each ten hours of class in each subject area. It involves approximately five minutes per class per day.

100,035 hours Prepared Exploration Experience
61,964 hours Integrated Career Education
162,000 Total Manhours of Career Education

1,200 students x 135 hours per year = 162,000 Manhours

IN SERVICE ACTIVITIES

A World of Work tour was scheduled for all teachers in September of 1971, prior to the start of the 1971-72 school year. All teachers at Western Reserve were requested to attend.

Arrangements for the tour were made with five selected companies in the Warren area with the help of the Industrial Information Institute.

An orientation meeting was called for all teachers. The purpose of this meeting was to explain the Career Exploration Program to the teachers, acquaint the teachers with occupations and give them suggestions as to how they could correlate career material into their curriculum. A follow-up meeting was held prior to the opening of school with the entire staff.

Department Heads meetings were held for all department heads to work in depth at integrating career information into the present curriculum guide.

An in-service workshops was held for all teachers at Western Reserve in order to give the department heads time to work with their departments for ideas for integration into their curriculum.

CAREER EXPLORATION

EXPLANATION OF DESIGNS

DESIGN I

Which is aimed mainly at the student who has interest in the vocational classes shall involve approximately 20% of the enrollment. This course, carrying credit, shall lead the vocational student to better understand what lies ahead in his desire for vocational training, in the high school, leading toward a life career.

DESIGN II

Will mainly be organizations related to career clusters where by all students in their ninth and tenth grades shall be eligible to belong.

DESIGN III

Is aimed at all ninth and tenth grade students. A required course in social studies, of which one-fifth of the time will be devoted entirely to achieving one's career. This course will carry credit.

DESIGN IV

Career Media Center, is designed for the use of all students 9-12. The students shall also have a person they can depend on who will be skilled in disseminating career information to them at the center which will be located in the library.

DESIGN V

Techniques and Success and Career Exploration will be a course which will aid ninth and tenth graders who are interested in developing their own potential through self motivation. The course shall be available to all for course credit.

DESIGN VI

Tours and Speakers shall cut across all areas, at all times, during the year. There shall be a major emphasis for a three day period. This shall be a highly structured and regimented approach. This is designed mainly because many of the youngsters have not previous career motivation and career orientation experiences. All ninth and tenth graders shall have the exploration opportunity.

DESIGN VII

Is merely an example of how all courses in the high school can involve career exploration. These integrated courses will eventually be developed for all class through the department chairman.

DESIGN VIII

The Career Exploration Specialist shall be the person who will aide all teachers and students in the implementation of the total program. He shall be responsible to the Career Development Coordinator to facilitate a continuum K-10.

DESIGN IX

Career Exploration opportunities (3) for each student to search the area related to his career interest. This experience will be performed in actual on-the-job situations in business and industry.

(It is believed that if all designs are implemented, all the ninth and tenth grade students will have optimum opportunities for career exploration.)

OBJECTIVES

1. To give the students an opportunity to acquire the necessary information needed to set realistic occupational goals.

2. To give the students an introduction to the technical knowledge and manipulative skills needed to be successful in occupation of his choice.

3. The students will be given a chance to learn the occupational procedures and requirements of the occupations they are interested in by actually performing these occupations in actual on the job situations under close supervision.

PROCEDURES AND IMPLEMENTATION OF PROGRAM

1. All of the ninth grade students were given an interest survey test. The students were grouped by interest areas indicated by the testing. All testing was done in the A.Y.C. unit, Design III.

2. An assembly for all ninth grade students was held to explain the career exploration program to them. The assembly was approximately one hour in length.

3. All ninth grade students spent four weeks in the "Achieving Your Career Unit". This unit was a part of the social studies curriculum. Each student spent one hour per day, five days a week for four weeks in this activity. The results of this unit are used as a basis for setting up exploration experiences for the students.

4. One hundred twenty boys were enrolled in the pre-vocational program in the tenth grade. Each boy spent one hour per day, five days a week, for eighteen weeks in small group instruction in the various vocational areas. Each student obtains fifteen hours of hands-on experience in each of the five vocational areas. After spending fifteen hours in each area, he then selected the one area he liked best and returned to it for fifteen additional hours of instruction.

5. A three week unit for those interested in vocational business was offered to one hundred fifty boys and girls. This gave them a chance to explore the various vocational business courses available to them. They spent one hour per day, five days per week for three weeks in this course.

PROCEDURES AND IMPLEMENTATION OF PROGRAM, Continued

6. There were at least five students per period, eight periods a day using the media room.

7. Thirty groups of five students or less spent half or full day sessions in industry viewing people performing occupations which the student had expressed an interest in.

8. Speakers were brought into the school to speak to various classes about occupations and careers. Each speaker was able to speak to eight classes of twenty five by employing our video tape equipment.

9. Thirty students were enrolled in the class titled "Techniques and Success and Career Exploration." The class met one hour per day, five days per week for eighteen weeks.

10. Twenty field trips were scheduled for large groups of students to visit industry. These trips took approximately three hours and each group had between ten and thirty students.

11. One hundred ninth grade boys were in the Industrial Arts program. They spent one and one half hours per day, five days per week for thirty weeks rotating through the different areas. Approximately one half of the time spent in these courses were devoted to career education with the emphasis on "hands-on" experience.

12. Thirty boys were enrolled in Industrial Arts Courses in the tenth grade. One half of this time wasspent on Career Education.

13. One hundred sixty ninth grade girls were enrolled in Home Economics. The girls rotated through three basic areas spending a total of one and one half hours per day, four days per week for thirty six weeks. Approximately one half of this time was spent on career education.

14. Speakers from various industries were scheduled to speak to various groups of students. The groups averaged 25-30 students and the sessions lasted approximately one hour.

15. Field trips were taken to various places of business in the community, where students viewed the various jobs being performed.

INVOLVEMENT

STUDENT INVOLVEMENT

1. Participated in career development activities within and outside the school.
2. Participated in individual and group projects.
3. Participated in meaningful field trips to local industry and business firms.
4. Participated in designing and developing career exhibits.
5. Participated in kids-in-industry days sponsored by local civic organizations.
6. Listened to and discussed the views of outside resource speakers.
7. Participated in planned role-playing activities.

TEACHER INVOLVEMENT

1. Participated in the in-service training program conducted by the career development program staff.
2. Worked cooperatively with career specialist for each grade level in development and complete plans for an integrated approach using the world of work as its core.
3. Worked cooperatively with the career specialist in the implementation and integration of career materials into classroom activities.
4. Worked cooperatively with the career specialist in developing and maintaining an occupational resource library for individual investigation by students.
5. Participated in and directed field trips to local industry and business firms.

PARENT INVOLVEMENT

1. Participated in conferences with teachers and career specialist.
2. Participated in field trips, arranged by the career specialist, for them, and for their children.
3. Participated as resource speakers for classrooms.
4. Cooperated with career specialist who made occasional visitations or phone calls related to career development.
5. Assisted the career specialist in contacting disenchanted and/or inactive parents.
6. Served on Advisory Committees.

Synopsis

CAREER MOTIVATION PROGRAM K-6

ELM, FIRST STREET, HORACE MANN, JEFFERSON, WASHINGTON, WILLARD ELEMENTARY SCHOOLS

(1) The Career Motivation program opened the year with a plant visitation workshop for teachers interested in attending. Special emphasis was placed on the work opportunities in the industries. (2) An increase in field trips and speakers have been used this year. (3) The teachers are using better follow up and preparation for the field trip and speakers. (4) All the new teachers and student teachers, (fifty) were given a workshop on the understanding of the world of work and a tour of the vocational wing of the high schools. (5) Principal's meetings have been held to improve implementation within their buildings. (6) Industry is continuing their acceptance of the program. (7) Local publicity is good and the community is becoming aware of the program. (8) Some industries take pride including the career program as a news feature in their own house organ. (9) O.E.A. has written about the program in the Ohio Schools; Changing Times carried an article about the program. (10) Industries' and speakers' response states that the kids are well prepared - they feel that the students are aware and interested. (11) Warren's schools administrative staff has been complemented by the Center for Occupational Education, On-Site-Team, on their total awareness, and involvement, and sincere belief, in the program, i.e., Superintendent, Directors, Supervisors, Principals, and members. (13) E.M.R. students become more aware of themselves and their peers and their potential thru the use of career materials. (14) School activity groups, i.e., patrol, lunchroom, librarian, audio visual workers, getting more relationships of their work as it relates to similiar occupations in the community. (15) All students participating in hands on activities in their schools' extra curricular groups are awarded a career motivation certificate. (16) K.S.U. Project, industrial technology, is expanding. a student teacher from elementary education and industrial arts classes will help correlate industrial technology with social studies - science and math, (on site). (17) Thirty student teachers from Youngstown University have been assigned to world of work for three 1/2 days per week. They have helped construct programmed materials for youngsters. (18) Working with Cleveland Plain Dealer for newspaper in the classroom and as it relates to the world of work, 250 students are involved in this trial project. (19) Six film-strip productions by the Industrial Information Institute have been completed. (20) Working with the area Health Association who have designed a program of health careers involvement in the schools. (21) Children are developing their own film-strip productions relating to career development. (22) Inexpensive cameras for classrooms are available for student observation of careers singled out in the community. (23) An attempt to offer rewards to teachers who are willing to write up their projects as they relate to World of Work, Career Motivation. Nine teachers are involved in a week's institute "Instructional development" a systems approach to implementation..

Synopsis

CAREER ORIENTATION 7-8
WEST JUNIOR HIGH SCHOOL

(1) Experiences in Career Orientation begin with a contemporary issue and the occupations that are concerned with it. After an issue is decided, those occupations which have any bearing on it are researched by use of resource speakers, audio-visual materials, library assignments, field trips, etc., i.e. a 6,7, and 8th grade class conducted the United Appeal campaign for their grade a contemporary issue and organized according to the occupations actually needed to plan and carry on a charity drive. (2) USQE Clusters of occupations are assigned to specific subject matter areas. (3) Within the contemporary issue, cluster groups are also assigned. This stimulates other subject matter areas being included resulting in investigation of a greater number of occupations. (4) The success of a program depends upon the principal being behind it. Since it does require some classroom teacher initiative, they have to know that deletion or compressing the amount of time formerly spent on a unit in their subject area to provide time for career orientation is acceptable. (5) Some older teachers have to be convinced that it is not always necessary or wise to "cover the book," although some teachers find it hard to break away from the textbook. The contemporary issue approach has made this more possible. Students have helped to preview and select materials. (6) Teachers have determined that resource speakers and field trips are not the principal parts of the CO program, but a part of the whole program. (7) A Science teacher and Math teacher developed a unit cooperatively in which they shared classroom teaching, helped each other's classes while one is on a field trip, etc. (8) Students in an English class prepared the commentary, ideas, etc. for a filmstrip as part of an advertising campaign for a series of events, among them the Career Development program itself. (9) A general unit on studying about occupations was given in 7th and 8th grade Social Studies classes this year. Materials were general in nature to avoid repetition in other classes and guarantee inclusion of some materials. The EPC Career Games were used in the 8th grade as a concluding part of the unit. (10) The CO office and its materials will be moved into, and become a part of, the Media Center attached to the library. Having all materials in one place will result in greater use of consolidating equipment, etc. (11) The CO Career Specialist was a member of a junior high school curriculum revision and textbook adoption committees. Materials for review were evaluated for opportunities to include CO experiences. The books selected were suited to career orientation activities. (12) The principal and assistant principal took over classes for teachers who were on field trips. While every teacher had a preparation period, it presented opportunities for better cooperation if they were not used to "cover" other teachers' classes. (13) Extensive use was made of the videotape to get more "milage" from a resource speaker. (14) It is difficult to schedule meetings for teachers in a particular department since they did not have the same free periods. If scheduled, they had to be after school. (15) The number of teachers participating in a voluntary pre-school in-service workshop in CO increased this year over last year. (16) Use of A-V materials put a strain on the amount of equipment available for school-wide use, requiring more to be purchased, if possible. Therefore, more is being bought with the contemporary approach. (17) Cooperation of parents who have volunteered to participate is excellent, ranging from speaking to groups of students to arranging and attending field trips to their places of work. (18) Science teachers and Language Arts teachers will be writing curriculum guides during summer and are including career orientation activities as an integral part of the curriculum.

Synopsis
CAREER EXPLORATION
WESTERN RESERVE

(1) A full day introductory in-service workshop was held at the start of the school year. (2) The program was discussed with the staff at the staff meeting. (3) Department head meeting have been held to facilitate integration of Career Education into all subject areas. (4) An assembly for all 9th and 10th grade students was held in order to explain the Career Exploration program to them, and how it will affect them. (5) Two groups of sixty students each completed the pre-vocational course. (6) All ninth grade students spent four weeks in the "Achieving Your Career" unit. (7) An occupational interest survey was given to all 9th grade students. (8) A Career Media Center was built adjacent to the library. Materials relating to careers in the form of books, filmstrips, cassettes, etc. for student and teacher use are located there. (9) An assembly was held for all interested 9th and 10th grade students to explain a course being offered titled "Techniques and Success and Career Exploration." Many students indicated high interest in the course. The course is a self study motivational course which emphasizes goal setting. (10) Approximately 24% of the 9th graders had a direct exploratory experience in industry with persons performing jobs related to the student's interests with some opportunity for "hands-on" experiences in these explorations. (11) The students at Western Reserve have had very little, if any previous experiences in Career Education. Therefore, arrangements were made for speakers and general field trips. (12) A complete testing program for all the students is being worked out with the department of Pupil Personal Services to administer the OVIS in the 8th grade, CATB in the ninth grade and the OVIS in the 10th grade. (13) It was necessary to employ substitute teachers, occasionally to cover classes for teachers accompanying students on field trips. As most teachers have never seen the world of work outside the classroom the experience enables them to relate jobs viewed on the trips with their subject areas. (14) A guide was developed with pointers for the students involved in explorations, aiding the student on knowing what to look for during an exploration. (15) A mid year report was given to all teachers. (16) As a result of the students researching careers of interest to themselves while members of the "Achieving Your Career" unit, exploration were located and assigned students in accordance with their research interests.

VT 017 553
MODEL PROGRAM STATEMENTS FOR THE 12 FUNCTIONS OF THE CALIFORNIA VOCATIONAL EDUCATION SYSTEM.

SAN MATEO COUNTY BOARD OF EDUCATION, REDWOOD CITY, CALIF.; CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. VOCATIONAL EDUCATION SERVICES.
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IDENTIFIERS - *CALIFORNIA

ABSTRACT - THE PURPOSE OF THIS DOCUMENT IS TO PROVIDE EXAMPLES OF STATEMENTS RELATED TO THE 12 FUNCTIONS OF THE CALIFORNIA VOCATIONAL EDUCATION SYSTEM, WHICH HAVE BEEN DEVELOPED BY LOCAL VOCATIONAL PRACTITIONERS. INTENDED TO SERVE AS GUIDELINES FOR LOCAL ADMINISTRATORS RESPONSIBLE FOR DISTRICT PLANNING, THESE 12 MODEL PROGRAM STATEMENTS WERE DEVELOPED BY 155 VOCATIONAL EDUCATORS IN 17 WORK GROUPS, REPRESENTING 22 COUNTIES IN CALIFORNIA. WRITTEN FOR HYPOTHETICAL SCHOOL DISTRICTS IN LOCAL AREAS, EACH STATEMENT CONTAINS: (1) A DEFINITION, (2) AN ANALYSIS OF A NEED, (3) GOALS, (4) SPECIFIC STEPS FOR ACHIEVING OBJECTIVES, AND (5) AN OUTLINE OF ALTERNATIVE METHODS FOR ACHIEVING THE OBJECTIVES. THE MODEL STATEMENTS DEAL WITH: (1) POPULATION NEEDS, (2) THE JOB MARKET IN RURAL NORTHERN AND URBAN SOUTHERN CALIFORNIA, (3) JOB PERFORMANCE REQUIREMENTS, (4) PROGRAM PLANNING, (5) VOCATIONAL EDUCATION PROMOTION, (6) STUDENT RECRUITMENT, (7) CURRICULUM RESOURCES AND ANCILLARY SERVICES, (8) GUIDANCE AND COUNSELING IN RURAL SOUTHERN AND URBAN NORTHERN CALIFORNIA, (9) JOB PLACEMENT, (10) VOCATIONAL INSTRUCTION IN RURAL NORTHERN AND URBAN SOUTHERN CALIFORNIA, (11) PROGRAM REVIEW, AND (12) EVALUATION. DESCRIPTIONS OF THE 12 FUNCTIONS AND PROGRAM PARTICIPANT CHARACTERISTICS ARE APPENDED. (AG)

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MODEL PROGRAM STATEMENTS

FOR THE 12 FUNCTIONS

OF THE CALIFORNIA VOCATIONAL EDUCATION SYSTEM

VOCATIONAL EDUCATION DIVISION
SAN MATEO COUNTY OFFICE OF EDUCATION

in cooperation with

VOCATIONAL EDUCATION SECTION
CALIFORNIA STATE DEPARTMENT OF EDUCATION

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PREFACE

The Vocational Education Amendments of 1968 and their accompanying regulations place increased emphasis upon planning and evaluation. This emphasis has influenced the development of "The California State Plan for Vocational Education" in general and "Instructions for Preparing a District Plan for Vocational Education" in particular. The latter document, advocating the development of a plan which evolves from 12 identified functions, is continuing to be revised annually to the point of taking on the characteristics and implications of program statements for each function with inherent parts alluding to need, goals, objectives, and alternatives.

The purpose of this document is to provide examples of statements related to the 12 functions which have been developed by local vocational practitioners. These statements are intended to serve as guides to local administrators who have responsibility for development of the district's local vocational plan. In no way are these statements intended to mandate objectives or stipulate activities or format.

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San Mateo County Office of Education's Vocational Education Division has been pleased to cooperate with the Vocational Education Section, California State Department of Education, in making this EPDA, Part F, project possible. It is hoped that through these efforts those many individuals dedicated to the furtherance of vocational education in the schools of California will be assisted.

ROBERT L. OBREY
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INTRODUCTION

In California vocational educators have identified 12 components essential in public school vocational education programs. These have been defined as the 12 functions of the California vocational education system.* In this state, the 12 function system concept provides a format for describing vocational education systems in district plans and is also useful in evaluating local programs and for other reporting.

To validate the system concept and to define its elements in more detail, in October 1970, selected county vocational education coordinators were asked to help develop model program statements applicable to one of the 12 functions. Under their leadership, 17 work groups of practicing vocational educators representing 22 counties of California were organized. During the school year of 1970-71, with assistance from State Department of Education vocational education consultants, each group formulated definitions, need statements, goals, objectives, and alternatives for one of the 12 functions. Since 17 groups were formed, some functions were covered by more than one group.**

An original intent of the project was to contribute toward improved district vocational education planning and to simplify the writing of district plans. Another intent was to disseminate the California vocational education system concept and increase local educational agency awareness of its use as a tool for planning, analysis, and evaluation. A third intent was to introduce local educational personnel to the concept and use of reporting formats for Program Planning Budget Systems and to provide them with experience in writing program statements. Funds granted under the Education Professions Development Act supported the latter phase of the project.

By the fall of 1972, most of the original 17 work groups had submitted a written product. Unfortunately, many of the original reports were too general to serve as examples of actual district planning. They also varied in their interpretation of the basic 12 function concept and project assignment. In order to produce a document which would be useful to local educational agencies throughout the state as a district plan model, the work groups were asked to cooperate with a technical editor in revising their original products.

Their new charge was to assume a hypothetical school district in their geographical area, and write some specific needs, measurable objectives, and alternatives to go with their functional definition and goals. In most instances, any similarity between the model program statement and an actual district is purely coincidental. In some cases the work group was encouraged to furnish a model reflecting a district just beginning to provide the product

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* The 12 functions are listed and defined, as shown in the "Instructions for Preparing a District Plan for Vocational Education," in Appendix A.

** Names and assignments of work group coordinators are listed in Appendix B. Some characteristics of the work group members and the districts they represented are summarized there also.

or service the function should produce. While a few work groups furnished the statement which a district actually intended to use in its district plan, this was the exception, rather than the rule.

The model program statements which comprise the body of this report are examples of what might exist within the local geographical and social context in which each was developed. In spite of this local focus, however, it is thought that the statements contain many details common to vocational education systems in schools throughout the state. They form a resource of examples based on hypothetical and real functional components, implementation strategies, and evaluative criteria for the 12 functions at the local level.

The program statements appear here in the same order as they would in a district plan. Each statement contains the following:

- Definition — Describes the function in the total system context.
- Need — Tells why the services and/or products of the function are necessary to the system in terms of the local area.
- Goal(s) — States the general purposes and aims of the function.
- Objectives — Lists specific steps to be accomplished (and the times for their achievement) in the course of working toward the goals.
- Alternatives or Strategies — Outlines the various methods considered for achieving the function objectives.

In formulating their statements for this resource document, the 155 participants from the 17 work groups gained skills which will, hopefully, encourage them to assist others in analyzing and describing their vocational education systems. Acknowledgment is due each work group leader and participant for his contribution.

In addition, recognition goes to San Mateo County Office of Education personnel who assisted in administering the project: Dr. Russell Kent, Superintendent of Schools; Robert Obrey, Administrator, Vocational Education Division; and Bruno Fabbro, Assistant Superintendent, Business Services Division; and to State Department of Education Vocational Education Section staff who served as consultants: Robert Barnes, Coordinator, Research Coordinating Unit; Roland Boldt, Chief, Program Services Unit; and Kenneth Densley and Ernest Neasham, Research and Evaluation Consultants. Roland Boldt and Ernest Neasham also served as technical editors.

Function 1 POPULATION NEEDS

DEFINITION

Establishing population needs calls for an analysis which results in providing a definition of the district service area and a determination of the potential clientele within the area. The results of the analysis should describe the characteristics of the target groups discovered in the service area.

NEED

The composition of this school district population has altered in the past decade. The local farming industry, once managed and operated largely by persons of oriental and anglo extraction, now depends on imported labor involving other ethnic groups. This change has altered the ethnic composition of schools in the area. The educational implications of this population change have not been completely assessed. In vocational education we have become aware of some of the bilingual difficulties of students who are presently in school, but we are not aware of the number of young people and adults who are not in school who could profit from vocational training. In addition, not enough is known about the vocational and social aspirations of the new ethnic elements or the constraints which might keep them from participating in local education.

GOAL

To provide district vocational educators with an economically feasible system for obtaining and maintaining population data which will provide the information necessary for planning vocational education programs which are valid both in terms of local manpower needs and the needs of the local population.

OBJECTIVES

1. Identify the major definable groups needing vocational education services in the local district service area. These groups will be defined according to age, sex, ethnic characteristics, educational status, and geographic location. A preliminary report of group definitions will be needed for district planning by November 1, 1972.

2. From local, county, state, and federal data banks and published reports, obtain as much information as possible about specific characteristics of the identified groups. This file of information, organized according to the specifications of district planning personnel, will be available for use by March 1973.

3. Identify additional information not available from the indicated sources which is needed for planning district vocational education programs so that future information requests can be made to agencies which might supply the data. This report will be made three months after presentation of the data file indicated in objective 2 above.

ALTERNATIVES

The district considered accomplishing these objectives by reassigning priorities among its own staff. Also considered and explored were possibilities of contracting for such services from the county or a private consulting firm. Utilizing district staff was rejected because of the need for adding personnel; this is not feasible under current budgetary constraints. The cost of an outside consultant was prohibitive. The county was able to provide the most satisfactory services for the least cost because it is providing such services to several other districts, and our district has become a part of the cooperative arrangement.

Function 2 JOB MARKET in Rural Northern California

DEFINITION

The job market function gathers information about existing and projected labor market needs for an individual school district and translates this information into usable form so that it can meet the information needs of the system.

NEED

The district presently relies on very general labor market information that gives little local specific information which would help in facilities planning, counseling, and curriculum revision.

GOAL

To obtain specific job market information which will permit the district to improve its planning for vocational education and which will make reliable information available to students planning their careers.

OBJECTIVES

1. Secure the services of the tri-county vocational education coordinator to furnish the district planning committee and the district counseling committee with all available local job market information. The coordinator will report to the planning committee on October 15, 1971, and to the counseling committee on January 15, 1972. The district will furnish the necessary additional financial support for the coordinator's services according to the district agreement with the county superintendent's office.

2. The superintendent will enlarge the present vocational education advisory committee so that it can become a better supplemental source of local job market information. Before the first meeting in September 1971, he will have selected additional representatives from retail merchandising, food service, and governmental services.

ALTERNATIVES

Two alternatives were considered to supply more precise labor market information: (1) to try to get HRD to change its reporting system so that it would deliver precise local labor market information in a form usable by the district, and (2) to hire an outside consulting firm to assemble and analyze existing information. We were unable to secure the services from HRD because they lacked the funding to furnish these services at this time. The cost for a private consultant was prohibitive and this alternative was rejected in favor of the county service.

DEFINITION

The job market function is a system of identifying, collecting, validating, storing, analyzing, and disseminating data regarding current, changing, and projected manpower needs within a specified geographical area, utilizing all available resources.

NEED

(Hypothetical case: District X has no vocational programs and a newly assigned coordinator who has been instructed by the board and superintendent to initiate and implement occupational education programs in the district.) Prior to the initiation and implementation of occupational programs, the available and emerging job market must be analyzed to insure placement opportunities for a reasonable number of graduates.

GOAL

To obtain a job market analysis by contacting an appropriate agency or agencies that will provide comprehensive, systematic, and continuous information of available and emerging job opportunities, thereby enabling improved planning and instruction.

OBJECTIVES

1. By November of the current school year the district will contact the county office to obtain the appropriate job market information for the proposed programs.

2. By December of the current school year the district will validate the job market information obtained by contacting one or more of the following:

   a. A professional labor market analyst
   b. Evaluation committees, teachers, county advisory committee members, or Personnel Management Association members
   c. Graduates, through a follow-up report
   d. Others

3. By February of the current school year the district will analyze the job market information for identification of new programs, expansion of existing ones and termination of those which do not meet the criteria of the job market information or population needs analysis.

4. By March of the current school year the district will incorporate the above objectives into the remaining ten functions for implementation.

ALTERNATIVES

(Not included by authors.)

Function 3 JOB PERFORMANCE REQUIREMENTS

DEFINITION

Those activities necessary to specify the skills, knowledges, and competencies required to prepare the individual student for gainful employment, enrollment in advanced training programs, or upgrading of skills; and to assist him in making occupational choices.

NEED

There are in operation courses and programs of vocational instruction which were developed at a time when business and industry needs for specific skills, knowledges, and competencies were different than they are today. There is a need to systematically review and update these vocational courses and programs in light of new and changing job performance requirements. In planning new programs of vocational instruction, there is need to validate curricula developed by others, or new curricula resulting from the identification of emerging occupations through job market analyses.

GOALS

To provide current information for systematically validating and revising existing courses and programs of vocational instruction, and for developing curricula for planned new vocational instruction.

OBJECTIVES

1. To develop a performance based curriculum in telephone directory assistance which is based upon the results of job performance analyses with Pacific Telephone Company.

   Evaluation: Has the curriculum been developed as described?

2. To develop written functional job descriptions for exploratory work experience with performance based related instruction in allied health occupations for at least two of the district's eight high schools.

   Evaluation: Have such descriptions been developed for two high schools?

3. To modify and implement a revised plastics technology curriculum, as recommended by the advisory committee, to provide increased emphasis on fabrication skills.

   Evaluation: Has the curriculum been modified as recommended?

4. To develop performance based learning activity packages permitting open entry/open exit of students in three allied health occupations.

   Evaluation: Have such learning activity packages been developed?

5. To develop performance based curricula in housekeeping, food service, and groundskeeping tailored to the learning disabilities of EMR students and supportive of student off-campus work experience training.

   Evaluation: Have these curricula for EMR students been developed?

ALTERNATIVES

1. Collect, review, and adapt existing curriculum materials with the advice of the advisory committee and/or individual members.

2. Contract with teachers or industry consultants to assist in developing new course performance requirements.

3. Contract with industry to develop course performance requirements and to operate courses.

4. Sample recently placed course graduates for recommendations for curriculum revisions based on their experience in meeting job performance requirements.

5. Sample employers of recently placed graduates as in 4.

6. Review annually with advisory committees the job performance requirements for each course.

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Function 4 PROGRAM PLANNING

DEFINITION

The purpose of the program planning function is to help maintain a balance of vocational education programs and services. This function integrates information on population needs, employment opportunities, and job skill requirements with district resources and capabilities. This data is then used to determine the feasibility of implementation, maintenance and/or termination of programs.

NEED

The present district method of vocational education course introduction is informal in nature. The district director of vocational education recommends the approval of programs and courses that are recommended to him by faculty members and others, based on his experience and knowledge of community needs. No vocational program has been dropped from any of the district high schools in the past ten years in spite of the fact that enrollment is some of them has been declining steadily.

The scarcity of district financial resources limits the number of vocational programs that can be maintained, but there is evidence that local employer demand and growing public dissatisfaction with the high rate of local youth unemployment can only be satisfied by a relevant program of vocational education which can serve increasing numbers of students.

GOAL

To recommend to the district a relevant vocational education program by identifying areas of vocational training which should be added, discontinued, or redirected.

OBJECTIVES

The assistant superintendent for curriculum and the director of vocational education, together with one designated representative of each vocational subject matter area, will recommend the establishment of a process for utilizing information about population needs, job market, and job performance requirements in planning new vocational education programs and modifying existing programs. Such planning will begin on September 15, 1971. Recommended and alternative process plans will be presented for the superintendent's review on November 15, 1971. Implementation of those parts of the selected process that are feasible under the present budget will commence on January 1, 1972.

ALTERNATIVE

Consideration was given to having the planning process designed by an outside educational consultant. This was not recommended because it was thought that local staff members, with their firsthand knowledge of the district, could do the planning more effectively. In addition, it was thought that administrative staff participation would result in the early effective implementation of the planning process.

Function 5 VOCATIONAL EDUCATION PROMOTION

DEFINITION

Vocational education promotion is a plan of activities to inform the various publics of the strengths and merits of vocational education. The plan of activities shall take into consideration the psychological climate and stimulus necessary to produce the desired response from these publics.

NEED

Vocational education is established as a primary function of the educational process through legislative enactment of laws introduced to meet the needs of all segments of our society. In meeting this function, a promotional plan for vocational education must be established, as education in general has not been responsive in building a favorable image for occupational training.

To establish such a promotional plan, avenues of communication must be open among students, parents, legislative bodies, professional and vocational associations, employers, and individuals within each respective community.

GOALS

1. To solicit the cooperation of the community, industries, and government agencies.

2. To inform the community about available occupational training.

3. To establish communication with professional and vocational associations for the further advancement of vocational education.

OBJECTIVES

1. The school district will invite representatives of the community, industries, government agencies and students to join an advisory committee whose responsibility is to develop and plan promotional programs for the district. This advisory committee will be selected by October 1, 1972, and will report its accomplishments and recommendations to the board of trustees by June 1, 1973.

2. The school district's vocational education administrators and head counselors will involve all of the district's counseling staff, vocational staff, and professional and vocational associations in a workshop to plan a vocational education promotional campaign to be carried out by the district counselors. Planning will be completed by December 1, 1972, and the campaign will be implemented by April 1, 1973.

3. The school district will inform the various publics about the benefits and availability of occupational training programs in the district through professionally prepared brochures; news releases to radio, television, and newspaper media; and prepared speakers backed up with professionally prepared audiovisual presentations on the occupational training programs. The vocational administration will report the endeavors and achievements in promotion of vocational education to the board of trustees by July 1, 1973.

ALTERNATIVES

1. Remain status quo and rely on promotional activities of the state vocational education office.

2. At the county level, contract with a private public relations firm to develop a promotional program for vocational education.

3. Employ a person at the county level to perform public relations services and develop a promotional program for vocational education.

4. Request each vocational coordinator to enlist the aid of counselors and vocational staff to develop a promotional plan for vocational education. Professional consultant services will be provided by school districts to assist in developing the program.

Alternative four was selected as being the most feasible method of realizing the stated objectives. This "grass roots" approach will provide the best communication links with the community.

Alternatives one, two, and three were rejected on the basis that they did not serve the needs of the community. Two and three were also rejected because of cost and the time required to orient the agency or persons to vocational education.

The selected alternative is within the budgetary limits of the individual school districts. The program will require the involvement of vocational instructors. Public relations consultants will be obtained to assist in developing activities and materials. In some cases, the services can be integrated into the instructional program of the district.

Function 6 STUDENT RECRUITMENT

DEFINITION

The basic concept of student recruitment is encouraging students to enroll in vocational education programs. Recruitment is aimed at those students or potential students who are of secondary school age and older, who are in school or out of school, and who are in need of entry level skills, retraining, or upgrading of skills necessary to advance upward on the job. Student recruitment is also aimed at initiating individual (one-to-one) contact with those students who have an identified need for vocational education, such as the disadvantaged and handicapped, for the purpose of encouraging them to enroll in vocational education programs.

NEED

To attract to the vocational education instruction program the students who are capable of profiting from the instruction. To reach those individuals in the general student population who are not now being served by vocational education.

GOALS

Every student, grades 7 through 12, will be continuously exposed to an effective information and recruitment program that will include educational opportunities available at each grade level. In addition, employment opportunities based on completion of any one of the various vocational programs will be made available to interested students in advance of enrollment.

OBJECTIVE

To expose 50 percent of the student body each year to opportunities in vocational education by scheduling career days, field days, and community resource speakers. A five percent increase in vocational program enrollment each year is anticipated.

ALTERNATIVES

If finances will not permit field days and field trips, we expect to increase the emphasis on career days with community resource people to provide exposure to the vocational occupations for the students.

If the school program will not permit the organized career days and community resource speakers, we expect to have an expanded information program made available to students, counselors, teachers, and administrators. This program will include flyers, posters, and brochures published, posted, and distributed on a weekly basis.

OBJECTIVE

To operate a program of inservice education as a regularly scheduled event at least once each quarter. The purpose is to expand the understanding, thereby increasing the level of sophistication of counselors, teachers, and administrators concerning vocational education programs. The success of this program

will be evidenced by the increased enrollment of students not now being served by vocational education.

ALTERNATIVE

If teachers, counselors, and administrators find it impossible to work the vocational information inservice training program into their schedules, we expect to ask the principal to give ten minutes at each monthly faculty meeting to promote vocational education programs. The presentation will be based on materials specifically prepared for counselors, teachers, and administrators.

OBJECTIVE

At least once each quarter to expose all students, grades 7-12, to a career information program consisting of publications, multimedia presentations, and teacher-prepared lectures on occupation and education opportunities that are directly related to existing school programs.

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Function 7 CURRICULUM RESOURCES AND ANCILLARY SERVICES

DEFINITION

The purpose of this function is to identify and assess the resources necessary to implement new and improved vocational education programs. Resources include personnel and the total instructional environment.

NEED

District personnel may be unaware of many of the instructional materials and aids which are available in the district schools that might be used in the vocational education program. Also, district personnel may not know of all the potential resources in the community that could be borrowed or acquired by the district at little or no cost.

The district has audiovisual equipment, but the supply of materials (films, filmstrips, etc.) is limited to a few obsolete filmstrips on shop safety. 16mm films can be ordered from the county film library, but the selection in various vocational areas is limited, and teachers sometimes cannot obtain the most current instructional films. In the past, inservice training for vocational education instructors has been limited to occasional workshops sponsored by county or state consultants.

GOAL

To identify those resources that will implement new and existing vocational programs.

OBJECTIVES

1. The district vocational coordinator, in cooperation with the vocational education teachers in each high school, will compile a complete inventory of equipment, instructional materials, publications, and resource persons in the district that could be used in the district vocational program. In addition, a similar survey of resources will be made in the community served by the district. This inventory, with the district coordinator's report of the project, will be deposited in the superintendent's office before April 1, 1972.

2. The district will be represented on the county superintendent's film selection committee by an appointed representative. The representative will compile a list of current vocational education requests which will be presented to the county committee by October 1, 1972.

3. The district vocational coordinator, in cooperation with the vocational education teachers, will preview available filmstrips and recommend the purchase of current materials by October 1, 1972.

4. The district will make released time available for all teachers whose assignments include vocational instruction to enable them to participate in the county workshops on P.P.B.S. to be held in the spring of 1972.

ALTERNATIVES

Film Resources. The fact that the district could acquire its own film library was considered. This was rejected, however, because district financial resources indicate that many more instructional resources could be acquired by cooperating with the county.

Inservice Training. The possibility of the district conducting its own P.P.B.S. workshops was considered, but the expense of hiring a consultant and the advantage of countywide conformity in accounting procedures made the county workshop the best choice.

DEFINITION

Vocational guidance and counseling includes those activities which provide information and assistance to youth and adults considering preparation for employment and a career goal.

NEED

Status of Existing Programs. Standard elements of vocational guidance and counseling service are available to students in high school grades nine through 12 and to a limited degree to adult students enrolled in evening programs. Students may request specific vocational guidance information and related services during a pre-arranged appointment with their assigned counselor. Information and services now available to students include:

1. An opportunity to review and discuss occupational information pamphlets and books containing descriptions of job requirements, employment preparation and training facilities, pertinent facts and data on the potential labor market, opportunities for advancement, et al.
2. Testing services such as aptitude, ability, interest, dexterity and self assessment are available on a limited basis to students who evidence unusual motivational, aptitude, discipline, or other problems.
3. Group, motivational, and self assessment tests are given once each year if time, schedule, and finances permit.
4. Some career and job information books and pamphlets are available in the school library. Most are located in the reference section. There are some career "Story Books" available for circulation.
5. A Micro-film reader and copy maker is available through the VIEW system. Students may read specific information about employment opportunities in their local area as well as data on college training courses and enrollment requirements.

Guidance and Counseling Program Needs. To meet the objective of the vocational guidance and counseling function, the following new services must be made available:

1. Motivational, interest-capturing guidance materials must be developed. Suitable materials available for purchase should be procured and used. Because of the short supply of guidance materials with the pizazz and schmaltz that appeals to the mature youth and adults of today, a means for production and dissemination of materials must be developed. Join the Navy or Be an Air Force Pilot posters may be used as examples of attention attracting materials.
2. A complete library of available vocational guidance books, pamphlets and audiovisual materials must be made available in all school, city, and county public libraries. This material should be in readily

accessible files, stacks, or racks and available for free loan under the existing library system. Library patrons should be encouraged to browse and borrow at will.

3. A mobile "bookmobile" type of vocational guidance service must be made available to adults, out-of-school youth and students in rural schools. The mobile unit shall work closely, possibly under contract, with the local schools and local library to establish a continuity of guidance information service. Visits of the mobile unit will be for motivational and special program purposes. It will serve as a link between school, public library, community, and employment service agencies. The operator of the mobile unit will work closely with local librarians and assist them in maintaining, updating, and displaying their guidance materials. During his stay he will demonstrate and promote the use of library vocational guidance materials to relieve the school counselor of this responsibility, which he is not equipped to assume.

4. A continuing financial base or source of funds to be used as needed to meet the needs identified in items 1, 2, and 3.

5. A resolution or written commitment from the school district's board of trustees to provide adequate financial and administrative support to a continuing program of vocational guidance services. The amount of financial support to be used specifically for vocational guidance may be apportioned from the total sum budgeted for all guidance services. A ratio derived from student follow-up statistics showing the percentage of former students employed in vocational pursuits to percentage of former students completing at least two years of college may be used as a guide for apportionment of support. Sources of additional support funds should be actively explored for purposes of procurement and use in expansion of the vocational guidance services.

GOAL

To assist students in preparing to make appropriate occupational or career choices themselves.

OBJECTIVE

Staff and equip a vocational guidance center in each high school by January 1973.

ALTERNATIVES

Apportion funds from VEA Entitlement and assign staff.

Develop and submit a project proposal for support of a new program.

Request assistance from community action and business groups.

OBJECTIVE

At least once during the next fiscal year, conduct general vocational guidance employment preparation seminars for high school students and adults enrolled in evening high school.

STRATEGY

Schedule, arrange, publicize, and implement the seminars.

OBJECTIVE

Provide self assessment testing of students enrolled in the eleventh grade.

STRATEGIES

Procure tests with Vocational Education Association funds; schedule group tests by arrangement with administrators, counselors, and teachers.

Advertise availability of testing service. Arrange for students to take tests on their own time in the school library, with costs of the tests paid out of general guidance budget.

OBJECTIVE

Assist in the promotion, development, and maintenance of a vocational guidance information and materials section in each public library.

STRATEGY

Hold meetings with librarians to discuss the need. Volunteer assistance in selecting and cataloging materials. Arrange for guidance center files and stacks and for publicity for the center.

DEFINITION

Guidance and counseling is a process by which the student is given assistance in establishing a career goal through self-appraisal and assessment, testing, and the acquisition of meaningful occupational and educational information. This should lead to the establishment of a plan which will prepare him for a career through appropriate educational experiences and types of work exploration. Career planning should result in increased and more effective usage of the vocational instruction available in the district, as well as improved services for students.

NEED

Students need to make career plans that are realistic in terms of their own abilities and interests and are also realistic in terms of employment opportunities. Many students in our district are still making unrealistic and impractical decisions regarding their employment future, as illustrated by the high rate of youth unemployment and the proportion of our students who drop out of college.

GOAL

The overall goal is to expand and maintain an effective program for career planning through occupational guidance and counseling.

OBJECTIVES

1. An inservice training program in career counseling will be conducted for district high school counselors. The content of this program will meet the approval of the American Personnel and Guidance Association Committee on Career Counseling. All counselors will be encouraged to attend either the fall workshop which will be held in October or the spring workshop to be held in March.

2. The district will, by the opening of the fall semester, make whatever adjustments are necessary to establish and maintain a new pupil-counselor ratio in the high school of 300 students to one counselor. The district director of personnel services will report the pupil-counselor ratio in each school to the superintendent by October 1, 1972.

3. The director of counseling services at each district high school will initiate a committee to investigate the adequacy of the school career information services. He will report to the superintendent specific recommendations for improving such services, including acquisitions of materials and services, by December 1, 1972.

ALTERNATIVES

Few alternative courses of action are available for accomplishing either the 300 to 1 counselor-teacher ratio or the investigation of career information services. In the first instance, additional personnel will be necessary, whether obtained through shift in assignment or additions to the staff. In

ALTERNATIVES (continued)

the second, considering present budgetary restrictions, investigation and recommendation must be accomplished by the present staff. It is suggested that the committee selected to make the study include both counselors and members of the library staff whose workloads can be adjusted to accommodate the additional task.

The inservice training program will best be accomplished by career guidance consultants obtained from the Santa Clara County Superintendent's Office in connection with the implementation of project "Search." The possibility of securing the services of the local state college was considered and rejected because of a conflict in guidance philosophy.

Function 9 PLACEMENT

DEFINITION

Placement is an aspect of a broad guidance and counseling process through which student employment is facilitated. It may embody exploratory work experiences, subject-related job opportunities, as well as employment upon graduation. In its manifold aspects, it may be described through California's system of work experience education, the career development process, employment counseling, as well as through assignment to work upon satisfactory completion of a program of vocational study.

NEED

The Human Resources Development Agency, until a few years ago, supplemented staff placement services by furnishing aptitude testing, individual student counseling, and job referral to the San Francisco schools. This service was discontinued, and the entire placement responsibility was assigned to district work experience coordinators. It has been noted, however, that the placement services furnished by the work experience coordinators has been increasingly restricted by the assignment of additional duties to these persons. A recent downtrend in the availability of jobs, together with increased state and national interest in the placement responsibilities of schools, has caused the district to reassess its student placement services with the aim of increasing their effectiveness.

GOALS

The ultimate purposes to be served by the placement function shall consist of one or a combination of the following:

1. The provision for after school, cooperative, or other training that enables occupational exploration, provides for skill development, or creates other work-related learning that supplements school instruction. Such placement is temporary and intended basically to provide for student exposure to the realities of the world of work while relevant school learning takes place.
2. Employment upon satisfactory completion of a course, program, high school requirements, or other education conditional for employment.

OBJECTIVES

1. To form a study committee to assess present placement practices and recommend how present services can be restored to former levels or made to exceed them. The committee will be appointed by the director of occupational preparation. The study will be initiated by October 1, 1972. A final report will be delivered by January 1, 1973.

2. The staff assistant for work experience education will design and conduct programs of inservice training for all personnel concerned with the placement function. Planning will take place during the summer of 1972. The program will be conducted during the fall of 1972.

OBJECTIVES (continued)

3. During the 1972-73 school year, each work experience coordinator will continue to devote at least one-half of his time to placement duties in a given high school. He will have a continuing case load of at least 50 students. He will keep a daily log of his activities, provide a monthly student placement report, and submit a yearly summary of his services by June 30, 1973.

4. Through classroom sessions, small group discussion, individual counseling, the use of learning packets, and like methods, each work experience coordinator will conduct a program of learning related to a student's part-time work experiences while he is in school and to full-time placement upon graduation. Elements of this program will consist of preparation for job-seeking (self-assessment, grooming, occupational exploration), the job application process, conditions of work, and other related factors.

5. Each work experience coordinator will continue to conduct a "senior survey" in his schools. This survey will be standardized on a form developed by the entire staff. Major elements will relate to school and work plans of the graduates. The work experience coordinator will assist those who seek employment upon graduation. Senior survey reports will be submitted to the staff assistant for work experience education by June 30, 1972.

ALTERNATIVE

A possible alternate course of action was considered. Additional personnel could be added to the staff to provide more of the necessary placement services. Under present budgetary restrictions, however, this course of action is not feasible. Any solution to present placement problems must be achieved within the existing personnel structure.

DEFINITION

Vocational instruction is providing students with learning experiences leading to the development of skills, knowledge, and attitudes necessary for job entry.

NEED

Del Norte County is an isolated rural county in the extreme northwestern corner of California. With the limited opportunity for obtaining advanced educational training afforded by this small community, a substantial number of students enter the job market directly from high school. Because of a limited local job market, a large number of our students migrate to the metropolitan areas of California and Oregon to seek employment. In addition to the initial vocational training needs of its young people, Del Norte County schools must also meet a considerable demand for retraining and upgrading of the vocational skills of its adult population.

Students who have been recruited into the system and who have been counseled by the system must be furnished with the opportunity to gain the skills, knowledge, and attitudes required to make them employable.

GOAL

To provide instructional services necessary to meet individual and community needs for vocational training.

OBJECTIVES

1. The district will hire an experienced specialist in vocational training to guide the expansion and development of the vocational education program. The vocational education specialist will be selected by the governing board of the school district. He will be assigned duties which will include the supervision of planning district vocational education and directing the regional occupational program.

Evaluation of this objective will be accomplished by observation. If the specialist has been hired and if the regional occupational program is in operation by the end of the 1971-72 school year, this objective will be considered accomplished.

2. During the 1971-72 school year, the district will develop plans for the inclusion of a simulated office as a part of the vocational curriculum. These plans will be incorporated in a project proposal which will be submitted for obtaining a federal grant to help with financing.

The performance of this objective shall be considered complete if the plans have been formulated and approved for federal financing by June 1, 1972.

ALTERNATIVES

1. To continue the instructional program as in the past with emphasis on the major vocational areas of trades and industry, forestry, office

ALTERNATIVES (continued)

occupations, distributive occupations, and home economics, leaving vocational instruction in minor areas to be accomplished in post-high school programs by training agencies outside the county.

2. To completely revise and expand the high school program to include vocational training in all areas regardless of enrollment.

3. To continue the instructional program of the past, revising it to meet changing needs, and to establish a regional occupational plan where training programs in areas now neglected because of low enrollment may be instituted. These programs would serve the adult population of the community as well as that of the high school.

Alternative three was selected as the alternative to be followed because it was the only one the committee felt would be economically feasible and also allow for improvement of our vocational education program.

DEFINITION

Vocational Instruction is that integral part of the total educational program that develops the skills, knowledges, and attitudes required for occupational competency.

NEED

At present, vocational education programs other than business-related programs are provided in four of the five district high schools. Recent policy statements from the board of trustees indicate that the district should initiate additional diversified programs of vocational instruction in all of its high schools, and should move to improve the quality of vocational instruction as recommended in a recent district vocational education evaluation study which was completed with the assistance of consultants from the state and Los Angeles County.

GOAL

To provide the environment and vehicle for imparting the necessary vocational skills and technical information to students as provided for in district policy.

OBJECTIVES

1. The district will acquire additional administrative services to assist in the preparation of educational specifications and personnel acquisitions and to implement an expanded program of inservice teacher training. The selection process will be completed by December 1, 1971, so that services can commence on January 1, 1972.

2. In the school year 1971-72, the district will provide all full-time vocational education teachers with 12 hours of inservice education.

3. In the school year 1971-72, schedules will be arranged so that any vocational education teacher who lacks a preparation period will be provided with one.

4. The district will provide substitute teachers so that each full-time vocational teacher can spend at least one full day in the school year 1971-72 visiting an industry or business related to his teaching field.

ALTERNATIVES

Additional Administrative Services. The district could acquire the recommended services by contracting with outside consultants. In consideration, however, of the present inadequate vocational education administrative staff and anticipating a continuing need for these services for the next several years, it is recommended that a new associate superintendent of vocational education services be acquired at the district level and the two present part-time coordinator of vocational education positions serving four of the high schools be increased to full-time positions serving all of the high schools.

ALTERNATIVES (continued)

Inservice Training. The district could acquire staff to conduct its own inservice training program. Because of the danger, however, of such individuals being diverted to other tasks and because they might not be able to keep up on the latest information, it is recommended that inservice teacher education services be acquired on a year-by-year basis from either of the two local state colleges or the state university.

Instructor Visitations. Instead of providing for substitutes, the district might wish to employ an additional teacher for the purpose of relieving the full-time staff members. Since the present number of full-time staff members would not require all of the time of such a teacher, he could be used for part-time planning and vocational education administration. At the present time, however, it is recommended that the temporary substitutes be used. Two years from now, with an expanded staff and additional programs and students, the acquisition of an additional relief teacher would be justified.

Function 11 PROGRAM REVIEW

DEFINITION

Program review is the examination or re-examination of individual vocational education programs and the total vocational education program for the purpose of insuring quality, completeness of planning, and appropriateness in terms of meeting priorities, goals, and objectives of the total educational unit.

NEED

The vocational education system needs to be represented fairly and accurately to the decision makers who control the resources required for the system to function. This involves presenting evaluative and program justification information for administrative participation in decision making.

GOALS

To convey, in an effective manner, information about vocational education that is needed for decision making.

To insure that the vocational education system is represented at the policy-making and decision-making level in the most effective manner.

OBJECTIVES

1. By the end of the first year, the vocational director will be included as a participating member of the superintendent's cabinet.

2. The vocational director will, within the first month of the current school year, determine the kinds of management information required at the decision-making level and transmit these requirements in terms of both content and format to the program planning, system evaluation, and other appropriate functional elements.

3. The vocational director will study alternatives based on resources and priorities which would improve the district's vocational education offerings, and present these to the superintendent's cabinet by the end of the current school year.

ALTERNATIVES

1. In the absence of a vocational director, the vocational unit will delegate the responsibility of representing the vocational education system to one of its members.

2. In the absence of direct representation of a vocational education individual on the superintendent's cabinet, analyze the communication link and make optimum use of the existing structure to convey vocational education system management information.

3. Create an independent vocational program review committee to function in the review process and convey their findings in the most effective manner to those who make policy and provide resources.

Function 12 EVALUATION

DEFINITION

Evaluation is the process of determining the degree to which the vocational education system is meeting its objectives. The results of evaluation are used as part of the management information system as well as for meeting the requirements for periodic reporting set forth in the California State Plan for Vocational Education and P.L. 90-576.

Evaluation in vocational education is comprised of two primary elements: (1) end-point (terminal) evaluation; and (2) functional (ongoing) evaluation. End-point evaluation is primarily concerned with how well the system met its overall objective as determined by follow-up studies of dropouts, hire-outs, and graduates and of the number of students enrolled versus the number of students who, in fact, should be enrolled. End-point evaluation can also be thought of as evaluation at a logical stopping place, such as when reports are due to the state.

Functional (ongoing) evaluation is directed at evaluating how well each basic function is meeting its objective. Functional evaluation should be carried out on a continuous basis, with the results being used for improvement in the system. The performance of the basic evaluation function should be periodic, with the results used to measure what is being done relative to what should be done.

NEED

The local district lacks objective evidence upon which to base its vocational education decision-making. Although a district plan is prepared according to the vocational education system format, actual knowledge about the system and the students who graduate after having experienced the system's process is not obtained in an objective manner. Decisions are based on the best subjective judgment of the school principal at the time he is forced to make them.

GOAL

To obtain information for improving the decision-making process in regional and local vocational education programs.

OBJECTIVES

1. Join the county cooperative effort to make a countywide high school graduate 3-year follow-up study. The district will contribute its share of the cost and will assign the vice principal to serve on the research advisory committee. The vice principal will report to the superintendent and the board of trustees on progress of the study at the June 1972 board meeting.

2. Teachers whose assignments include vocational education will obtain a standard student characteristic card for each of their vocational students from the district office in September 1971. These cards will be maintained by the teachers according to directions furnished by the county survey committee and will be submitted to the county master file to become a permanent record on June 15, 1972.

ALTERNATIVE

The idea that the district could do its own follow-up study was considered. This was rejected, however, in favor of the county survey because of the cost and the administrative time commitment which would have been required for the local study.

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Appendix A THE 12 FUNCTIONS*

1. POPULATION NEEDS

This function is primarily concerned with establishing and maintaining an information file which describes the population being served. To meet the objectives of the function, the information file should contain such data elements as are required to establish the relative vocational education needs of the target population, including the population in model cities, particularly those persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program.

2. JOB MARKET

The job market information function is the counterpart to the population needs function insofar as it is essentially concerned with the demand side of the labor demand/supply curves. The function is primarily concerned with developing and maintaining a file of information on existing and new and emerging occupations which (1) fall within the occupational categories served by vocational education; and (2) have current or anticipated excess demands.

3. JOB PERFORMANCE REQUIREMENTS

This function represents the task of establishing job specifications for the vocational instruction program. These specifications include the identification of the skills and knowledges required to achieve the occupational or other objective of instruction.

The development of the specifications should probably involve the use of the task analysis technique using data supplied by individuals having skills in and substantive knowledge of the occupation or the occupational skills included in the instruction and/or requirements of licensure when appropriate. Representative vocational education advisory committees are required and will be of great importance in establishing the true requirements for entry level and progression in the vocational field.

4. PROGRAM PLANNING

This function is concerned with integrating information on population needs and job opportunities in the light of the area manpower plan (if any) and budget constraints to develop new and improved curricula so that a proper assortment of programs is offered. Clearly, this function, which includes area planning, if of paramount importance to the future success of the system.

5. VOCATIONAL EDUCATION PROMOTION

The purpose of this function is to plan and execute those activities necessary to inform the public of the strengths and merits of vocational education. The promotion of vocational education should take into consideration what population groups are most critical to the primary objectives and desired results.

---

* As defined in "Instructions for Preparing a District Plan for Vocational Education," 1972 edition.

6. STUDENT RECRUITMENT

The student recruitment function is aimed primarily at identifying those who need vocational education and encouraging those so identified to enroll in a program of instruction. Recruitment can be directed to those already in school or those out of school. In essence, recruitment is primarily concerned with the task of initiating personal contact between individuals and the system. Recruitment differs from vocational education promotion in that the objective of promotion is to change attitudes rather than to initiate contact with potential students.

7. CURRICULUM RESOURCES AND ANCILLARY SERVICES

The purpose of this function is to obtain the resources necessary to improve existing and/or develop new vocational education programs. Such resources include materials (textbooks, worksheets, standard tests, and so forth), equipment (lathes, keypunch machines, drill presses, and so forth), physical plant, and trained instructors. In addition, the function is concerned with the development of ancillary services such as audiovisual equipment, library services, and inservice instructor training programs.

8. GUIDANCE AND COUNSELING

The guidance and counseling function consists of those activities necessary to provide individuals with sufficient information to allow them to make meaningful and informed occupational choices. The term "information" is meant to include data relating to the availability, characteristics, and recruitment of jobs for which training is, or will be, available, as well as the individuals' vocational interests and capabilities. In this sense, then, the function is also concerned with continual individual assessment.

9. PLACEMENT

The objective of this guidance function is to provide individuals with sufficient information to make a meaningful and informed occupational choice and, if that choice is employment, to assist them in finding that employment which best fits their needs and the needs of employers. As with the guidance and counseling function (item 8), however, in the last analysis the individual himself makes the final decision as to his course of action, although this decision may be constrained by available opportunities.

10. VOCATIONAL INSTRUCTION

Vocational instruction function represents the major activity of the system; that is, providing instructions to individuals for the purpose of preparing them for gainful employment or advanced vocational-technical training. Most of the resources available to the system will be utilized in performing this function.

The success of the program of instruction is highly dependent on a number of other activities which precede it, including analyzing the needs of the

population, identifying specifically where job vacancies exist or will exist, developing an effective program plan, developing curricula which are responsive to the true skills and knowledges required to enter and succeed in a vocational field, and assisting students, through exploratory and remedial instruction, to select and succeed in a vocational program.

11. PROGRAM REVIEW

This function is included to represent the requirements for review of local program plans. The existence of a decision-making activity which may be beyond the control of the local director is of concern in local level evaluation. To a large extent, however, the acceptance of a plan will be dependent on the quality and completeness of the program planning information, which provides an opportunity for a further evaluation of that activity.

12. EVALUATION

Evaluation is the process of determining the degree to which a system is meeting its objectives. The results of evaluation are used as part of the management information system as well as for meeting the requirements for periodic reporting set forth in P.L. 90-576.

Evaluation in vocational education is comprised of two primary elements: (1) end-point (terminal) evaluation; and (2) functional (ongoing) evaluation. End-point evaluation is primarily concerned with how well the system met its overall objectives as determined by follow-up studies of dropouts and graduates and the number of students enrolled versus the number of students who, in fact, should be enrolled.

Functional (ongoing) evaluation is directed at evaluating how well each basic function is meeting its objectives, which are, in essence, subobjectives of the overall system. Functional evaluation should be carried out on a continuous basis, with the results being used for improvements in the system. The performance of the basic evaluation function should be periodic, with the results used to satisfy the annual reporting requirements. One of the more straightforward methods used in functional evaluation is to ask "what questions would you ask to determine how well a function has been performed?"

Appendix B WORK GROUPS

COORDINATORS OF WORK GROUPS

1. POPULATION NEEDS
   Fresno
   Donald W. Fowler, Coordinator, Vocational Education

2. JOB MARKET
   Nevada, Placer, Yolo
   Forrest L. Honnold, Coordinator, Vocational Education
   San Diego
   Lloyd Halvin, Coordinator, Vocational Education; Director ROP
   Richard Adams, Intern Coordinator, Vocational Education

3. JOB PERFORMANCE REQUIREMENTS
   San Mateo
   Robert Obrey, Administrator, Vocational Education Division

4. PROGRAM PLANNING
   Ventura
   John L. Van Zant, Director, Occupational Education
   Chester Howe, Director, Extended Services

5. VOCATIONAL EDUCATION PROMOTION
   Santa Barbara
   William J. Callahan, Coordinator, Vocational Education

6. STUDENT RECRUITMENT
   * Monterey
   Albert L. Ratliff, Coordinator, Vocational Education
   Riverside
   Ray House, Director, Vocational Education

7. CURRICULUM RESOURCES AND ANCILLARY SERVICES
   San Joaquin
   Pat Valladao, Coordinator, Vocational Education
   Edwin P. Lamoreau, Director, Planning and Development

8. GUIDANCE AND COUNSELING
   San Bernardino
   Glen M. Larsen, Coordinator, Vocational Education
   Santa Clara
   Kenneth D. Casteel, Assistant Director, Vocational Education
   Stanley R. Ostrom, Assistant Director of Guidance

9. PLACEMENT
   San Francisco
   Bruno Zachary, Staff Assistant, Occupational Education Division

10. VOCATIONAL INSTRUCTION
    Del Norte
    George H. Whalen, Principal
    Bonnie Baggett, Instructor, Business Education
    Los Angeles
    Lee W. Ralston, Administrator, Vocational Education
    David Taxis, Consultant, Practical Arts and Vocational Education

* Program statement not included.

11. PROGRAM REVIEW

Alameda

Don Boriolo, Coordinator, Vocational Education

12. EVALUATION

Colusa, Sutter, Yuba

David A. Davini, Director, Vocational Education

James E. Gattian, Coordinator, Vocational Counseling

Marin

Ernest Lynch, Director, Vocational Education*

SOME CHARACTERISTICS OF WORK GROUP MEMBERS AND THEIR DISTRICTS

During the project work group coordinators completed participant data summaries which described some characteristics of participating members of their groups. A compilation of these reports revealed the following about the 155 participating work group members and their school districts:

- The typical participant was male (only four percent were female) and all but four percent were white. Three out of four were thirty-five or older. Over three-fourths held positions as administrators or supervisors; the remainder were employed as teachers (14 percent) or pupil personnel specialists (10 percent).

- Three-fourths of the 155 participants held advanced degrees (masters, 70 percent; doctorates, 6 percent). Nearly half (48 percent) had 15 or more years of teaching or other employment in the field of education; 22 percent had been so employed 20 years or more. Only 13 percent had been in the field less than ten years.

- Participants' school assignments most often covered a grade level range including junior high as well as senior high; 85 percent represented school affiliations covering grades 7-12 at the least; another 11 percent held post-secondary assignments.

- Vocational education programs represented were fairly evenly distributed as to type of area served, with a somewhat larger proportion operating in rural contexts (40 percent) than in urban (33 percent) or suburban (27 percent). About one-third of the programs served poverty areas (14 percent in urban areas, 15 percent in rural). 85 percent of the participants reported that less than 20 percent of their students were from families living below the poverty line.

* Left his position before project was completed.

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THE 12 FUNCTIONS OF THE CALIFORNIA VOCATIONAL EDUCATION SYSTEM

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4 PROGRAM PLANNING	8 GUIDANCE AND COUNSELING	12 EVALUATION

VT 017 562
PHILLIPS, DONALD S.;RITTER, KENNETH L.
A ONE YEAR FOLLOW-UP EVALUATION OF A TRAINING PROGRAM FOR VOCATIONAL AND TECHNICAL EDUCATION ADMINISTRATORS.

OKLAHOMA STATE UNIV., STILLWATER.; OKLAHOMA STATE DEPT. OF VOCATIONAL AND TECHNICAL EDUCATION, STILLWATER.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
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IDENTIFIERS - *FOLLOW-UP EVALUATIVE ASSESSMENT; OKLAHOMA

ABSTRACT - THIS SUMMARY OF THE FOLLOW-UP EVALUATIVE ASSESSMENT OF A TRAINING PROGRAM FOR VOCATIONAL AND TECHNICAL ADMINISTRATORS INSTITUTED IN OKLAHOMA DURING 1970-71 WAS CONDUCTED OVER A SPAN OF TEN WEEKS AND EMPLOYED THREE METHODS OF DATA COLLECTION: QUESTIONNAIRE SURVEYS, INTERVIEWS, AND AN EVALUATION MEETING. DATA WERE OBTAINED FROM PROJECT PERSONNEL AND PARTICIPANTS. FINDINGS REVEALED THAT: (1) THERE IS A PRESSING NEED FOR MORE PROGRAMS OF THIS TYPE, (2) THE PROJECT WAS BASICALLY SUCCESSFUL IN THAT THE OBJECTIVES OF MOST OF THE PARTICIPANTS WERE FULFILLED, (3) MORE INPUT FROM LOCAL ADMINISTRATORS SHOULD BE UTILIZED, (4) FUTURE PROGRAMS SHOULD CONSIDER INTEGRATING OTHER AREAS SUCH AS CAREER EDUCATION, (5) MORE PLANNING SHOULD BE GIVEN TO THE ISSUANCE OF GRADES AND EARNED CREDITS, (6) GREATER EFFORTS TO MAKE ALL PARTICIPANTS AWARE OF THE GOALS ARE NEEDED, AND (7) TRAINING SITE SELECTION SHOULD BE CONSIDERED IN LIGHT OF PARTICIPANTS' NEEDS. (SN)

VT 017 562

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EPDA 553

A ONE YEAR FOLLOW-UP EVALUATION OF A TRAINING PROGRAM FOR VOCATIONAL AND TECHNICAL EDUCATION ADMINISTRATORS

May 22, 1972-July 31, 1972

Oklahoma State University

Stillwater, Oklahoma

Submitted to the Oklahoma
State Department of Vocational and
Technical Education

VT 017562

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A ONE YEAR FOLLOW-UP EVALUATION OF A TRAINING PROGRAM FOR VOCATIONAL AND TECHNICAL EDUCATION ADMINISTRATORS

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Submitted to the Oklahoma State
Department of Vocational and Technical Education
Stillwater, Oklahoma
July, 1972

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FOREWARD

Effective evaluation is essential if improvements are to be made in education and training programs. While this is an easy statement to make, it is difficult to achieve. This report presents the results of a one year follow-up evaluation of a training program for vocational and technical education administrators. It is hoped that this information will serve to improve future in-service programs. The areas discussed in this report are relevant to the total program itself, but do not explain many of the specific details of the program. A more indepth analysis of the program design and implementation is presented in a final report called, A Training Program for Vocational and Technical Education Administrators, by Donald S. Phillips. Reference to the final report will provide any necessary background information on areas that may only be briefly mentioned in this report.

This evaluation could not have been accomplished without the input of several individuals. Sincere appreciation is expressed to the program instructors and participants who gave of their time to make input to the evaluation. A special thanks goes to:

Leon Applegate	Robert Keck
Roy Byrd	Loyd Parker
Kenneth Carleton	Charles Parr
J. R. Gililland	Bill Powers
Larry Ann Holley	JoAnne Ruark

who served as consultants to the project.

The one year follow-up evaluation consisted of several interrelated activities carried out during a ten week period. Sincere appreciation

and gratitude is expressed to Kenneth L. Ritter for the leadership he provided in conducting the evaluation. Mr. Ritter was responsible for the detailed planning and implementation of the various phases of the follow-up evaluation.

Donald S. Phillips
Project Director

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CHAPTER I

INTRODUCTION

With the rapid expansion of vocational and technical education offerings during the past decade came a demand for qualified educational leaders to serve as administrators for vocational and technical education programs. The Oklahoma State Department of Vocational and Technical Education recognized this demand and identified administrative training as its number one priority area for the 1970-71 academic year. Utilizing Title II, Part F, funds made available under Section 552 and Section 553 of the Vocational Education Act of 1968, the State Department of Vocational and Technical Education and Oklahoma State University combined resources to develop two types of training programs for vocational and technical education administrators. Section 552 dealt with the training of vocational and technical education administrators through a doctoral degree program. Section 553 dealt with a number of areas, but in particular it sought to upgrade vocational and technical education administrators through an in-service training course or workshop.

The upgrading training program of vocational and technical education administrators done under Section 553, hereafter referred to as the EPDA 553 Program, was conducted during the summer of 1970 through the 1970-71 academic year. During that time several phases of evaluation were used to monitor the quality of the training. This provided immediate feedback about the EPDA 553 Program, but had no real views toward the

long-range effects of the training. An evaluation one year after the completion of the training for the EPDA 553 Program was conducted, and this report is the result of that evaluation.

In order to better understand the scope of this report, a brief description of the program design, a statement of the purpose and the objectives of the training programs are presented to provide the reader with a base for viewing the evaluation.

Program Design

Summer Institute

During the summer session of 1970 a four-week institute was conducted on the Oklahoma State University campus. Thirty fellowships were awarded to administrators and administrative aspirants, and they were permitted to enroll for resident graduate credit (one semester hour credit for each week). In addition, a limited number of interested persons were enrolled in the program. The summer institute was conducted on-campus to allow the program participants to be away from the current problems at their local schools.

The course material during each of the four weeks was devoted to specific topics and instructed by out-of-state or in-state consultants. The topics discussed during the four-week summer institute were:

1. Social Implications for Occupational Education
2. Political Implications for Occupational Education
3. Local Responsibilities for Reimbursed Programs
4. Economic Implications for Occupational Education

The activities conducted by the visiting consultants and resource personnel were informative and allowed for panel and informal discussions by the participants. The participants were given periodic additional written assignments and made committee reports.

Academic Year

During the academic year 1970-71, the participants were enrolled in an in-service program for three semester hours of resident credit. Sixty fellowships were awarded to administrators or administrative aspirants. Other interested school personnel chose to participate at their own expense. The training was conducted at three off-campus locations, Duncan, Tulsa, and Oklahoma City. The program instruction consisted of two hours of classroom session each week at each of the three off-campus locations, and one monthly meeting on-campus for summarizing each topic. The weekly sessions at the three off-campus locations were conducted by university faculty and personnel from the Oklahoma State Department of Vocational and Technical Education. The on-campus monthly meetings were conducted by nationally recognized leaders in the field of vocational and technical education.

Each semester was divided into four units with weekly sessions devoted to specific sub-topics. The units discussed in each semester were:

Fall

1. Public School Administration
2. School and Community Relations
3. Student Service and Adult Education
4. Review and Analysis of Research in Occupational Education

Spring

1. Manpower Analysis
2. Curriculum Development for Vocational and Technical Education
3. Program Planning for Vocational Education
4. Current Trends and Development in Occupational Education

The material discussed in the units came from (1) course material used at Oklahoma State University with individual instructor modification and (2) other non-campus instructors who highlighted their special areas of expertise relevant to vocational and technical education.

Purpose

Several phases of evaluation of the summer institute and the academic year units were conducted while the program was in progress and near the end of the program. This provided immediate evaluation input concerning the program's instruction units and objectives. The final stage of evaluation was needed to view the results of the training program at a later date. This report is an evaluation of the training program one year later.

In short, the purposes of this report are to (1) view the objectives of the EPDA 553 Program and see to what extent they had been met, (2) analyze the EPDA 553 Program organization and management, and (3) see what changes can be made to improve future programs like the EPDA 553 Program.

An evaluation of this kind can only aim at findings that can be drawn from personal opinions of the participants as to its usefulness to them. It is for this reason that the information obtained from this

evaluation will be subjective and seen from only a time period of one year later.

Objectives

In evaluating the EPDA 553 Program a year after its completion, it becomes necessary to go back into the past and review the original objectives. While the objectives from the past may have changed or may have been altered as the program grew, they are still important for viewing the initial purpose of the program and the actual outcomes. This evaluation, thus, involves looking at the following objectives of the program.

Primary EPDA 553 Program Objectives

1. To update and improve the skills and competencies of vocational and technical education administrators in Oklahoma.
2. To provide pre-service experiences for persons aspiring to administrative responsibilities.

Unwritten Objective

1. To expose the participants in the program to a number of topic areas which would make the participants more cognizant of their weaknesses and strengths in administration.

Specific EPDA 553 Program Objectives

1. To develop a sound philosophy of the principles and practices of vocational and technical education necessary for administering quality vocational and technical education programs.

2. To interact effectively with representatives of industry, business, and labor in order to assess the needs and priority areas for vocational and technical education and translate these needs into educational programs.

3. To identify policy and decision makers in authoritative positions who can effect changes in educational programs and to interpret the role of vocational and technical education to these significant groups.

4. To understand the roles and responsibilities of the myriad of programs promulgated by the several national, state, and local agencies which impinge on the field of vocational and technical education; and, where appropriate, utilize resources from programs such as CAMPS, JOBS, OEO, WIN, and other programs as they develop to effectively meet the needs of persons who need vocational and technical education.

5. To communicate effectively with administrators of the several types of institutions, such as area vocational-technical schools, junior colleges, technical institutes, and colleges and universities, to assure an effective interface among and between such institutions.

6. To develop an awareness and understanding of PPBS and its relevance to effective program planning, implementation, evaluation, and administration.

Follow-Up Evaluation EPDA 553 Program Objectives

After the EPDA 553 Program had been completed, several future points of evaluation about the program needed to be analyzed. These points of evaluation are covered in the following questions:

1. Are participants working in positions different from the ones they were in prior to the project?

2. Has the project actually helped them in terms of their leadership responsibilities? How?

3. In light of experiences since participation in the project, what is their re-evaluation of the project?

4. Have new projects or processes been initiated as a result of the project?

5. What changes have been made in education programs of participants since the termination of the project?

6. How might a project of this type be improved?

CHAPTER II

METHODOLOGY

The follow-up evaluation of the EPDA 553 Program was conducted in three steps over a span of ten weeks: questionnaire, interviews, and evaluating meeting. Each of these three steps is explained below.

Questionnaire

A questionnaire (see Appendix A) was designed during May of 1972 with the assistance of personnel from the Oklahoma State Department of Vocational and Technical Education and the School of Occupational and Adult Education at Oklahoma State University. The questionnaire was aimed at analyzing the objectives, organization, and management of the EPDA 553 Program. Individual phone calls to the participants' employing institutions were made to update the mailing addresses of the participants for the summer, 1972. The questionnaires were mailed June 5, 1972, to the 78 participants of the EPDA 553 Program. A reminder postcard was later mailed to assure a fast response.

Interviews

Interviews with 14 instructors who taught various topics in the EPDA 553 Program and with 22 participants in the EPDA 553 Program were conducted during June and July of 1972. The interviews provided personal contact with different people who were involved in various parts

of the program and served to (1) provide information about the instructor's views toward the program and (2) provide a chance to meet with participants in the program and discuss areas that could not be put in the questionnaire or were omitted from the questionnaire. Since this evaluation was conducted over a short period of time and the participants were difficult to contact during the summer, the interviews were not set up to give a representative sample of all the people involved in the program. Instead, the results of the interviews were designed to broaden the understanding of the program participants who served as consultants in the evaluation meeting.

Evaluation Meeting

Ten of the participants in the EPDA 553 Program served as consultants at an evaluating meeting held July 12 - 14, 1972, in Stillwater, Oklahoma. The evaluation meeting analyzed the results of the questionnaires and interviews and formulated recommendations from interaction with two panels. The breakdown for the evaluating meeting was set up the following way (see Appendix B for Agenda of EPDA 553 Program Evaluation Meeting, List of Consultants, and List of Panel Members):

July 12, 1972 -- Analyzing results of questionnaire and interviews

July 13, 1972 (Afternoon) -- Discussion of questionnaire and interview results with personnel from the School of Occupational and Adult Education and the Graduate College at Oklahoma State University.

July 13, 1972 (Evening) -- Discussion of questionnaire and interview results with personnel from the Oklahoma State Department of Vocational and Technical Education.

July 14, 1972 -- Formulating and finalizing recommendations for the EPDA 553 Program.

CHAPTER III

RESULTS OF THE STUDY

These results came from four sources and are presented in the following manner: Results from the Participant Questionnaire; Results from Instructor Interviews; Results from Participant Interviews; and Highlights of the Panel Discussions.

Results from the Participant Questionnaire

The questionnaire was sent out to the 78 participants in the program, and a 92.3 percent return was received. When reading the results of the questionnaire, three considerations should be kept in mind:

1. The participants had different vocational and technical education backgrounds (administrators, 52.6 percent; instructors, 39.7 percent; other various backgrounds, 7.7 percent).

2. The participants were enrolled in separate phases of the program (summer, fall, spring).

3. The questionnaire called for personal opinions.

Table I lists the reasons the participants enrolled in the program. There may have been several reasons why they enrolled in the program (i.e. college credit, training, friends were enrolled, etc.), but the reasons listed are those relating to the primary objectives of the program. The results of Table I show that there was a high percentage,

70.8, who enrolled in the program to gain or improve skills and competencies to use as administrators or future administrators. The 18.1 percent indicate that some instructors enrolled in the program to gain a broader understanding of vocational and technical education to improve their classroom teaching. The "Other" category in this and all other questions within the questionnaire can be found in Appendix C.

TABLE I

RESPONSES TO THE QUESTION, "WHY DID YOU ENROLL IN THE EPDA 553 PROGRAM?"*

Responses	Percent 0 — 50
To improve my skills and competencies as a vocational and technical education administrator.	45.8
To gain knowledge of vocational and technical education for use in the future as an administrator.	25.0
To gain some general knowledge about vocational and technical education.	8.3
To improve my classroom teaching by gaining a broader understanding of vocational and technical education administration.	18.1
Other	2.7

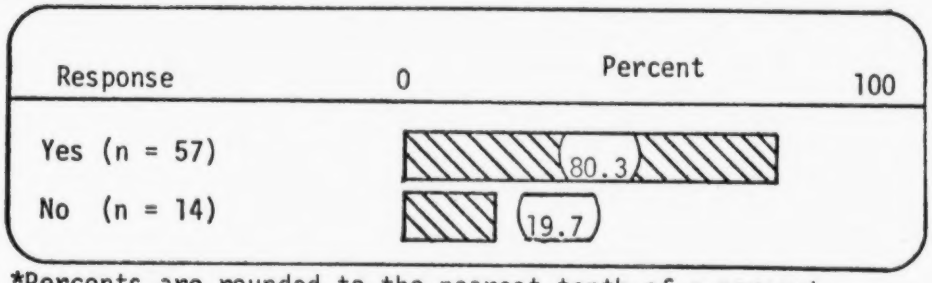
*(n = 72) Percents are rounded to the nearest tenth of a percent.

The responses to the question, "Did the EPDA 553 Program meet your reason for enrolling?", as shown in Table II, indicates that a very large percentage (80.3) of the participants did feel that the program fulfilled their reason for enrolling. It should be noted that the

answers "Yes" or "No" required a definite response from the participants and alleviated the possibility of indecision.

TABLE II

RESPONSES TO THE
QUESTION, "DID THE EPDA 553
PROGRAM MEET YOUR REASON FOR ENROLLING?"*



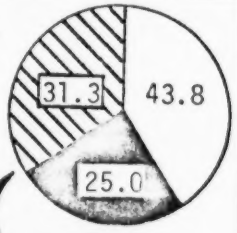
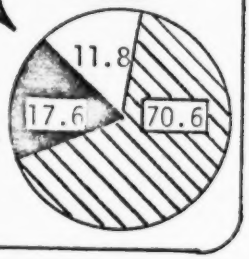
*Percents are rounded to the nearest tenth of a percent.

From Table III it can be noted that 77.5 percent of the participants had not changed positions since the completion of the program. Furthermore, 88.2 percent of the same group felt that "much" or "some" of the influence from their participating in the program had an effect on their job performance. While at the same time, the 22.5 percent of those who did change jobs indicated that the program had a lesser amount of influence (53.3) on their changing positions. From those who did change positions, it is difficult to establish whether they went up or down the occupational status spectrum.

Data relative to questions aimed at finding how, and in what ways, the knowledges gained by the participants in the program were used are presented in Tables IV and V. Table IV shows that a majority of the participants felt that the knowledge gained in the program was used indirectly. There was a substantial 34.3 percent who felt the knowledge gained in the program directly applied to their work.

TABLE III

RESPONSES TO THE QUESTION, "HOW DO YOU FEEL THE KNOWLEDGE GAINED IN THE EPDA 553 PROGRAM HAS BEEN USED BY YOU IN YOUR EMPLOYMENT POSITION THIS PAST YEAR?"*

Percent	Response		Percent
22.5	Yes (n = 16)	How much influence did your participation in the EPDA 553 Program have on changing jobs?	
		= much = some = none	
77.5	No (n = 55)	How much influence did your participation in the EPDA 553 Program have on your job performance this past year?	

*Percents are rounded to the nearest tenth of a percent.

TABLE IV

RESPONSES TO THE QUESTION, "HOW DO YOU FEEL THE KNOWLEDGE GAINED IN THE EPDA 553 PROGRAM HAS BEEN USED BY YOU IN YOUR EMPLOYMENT POSITION THIS PAST YEAR?"*

Response	Percent (0 – 50)
It was directly applied.	34.3
It was indirectly applied.	52.9
It was not applied, but might be in the future.	8.6
It was not applied and never will be.	1.4
Other	2.9

*(n = 70) Percents are rounded to the nearest tenth of a percent.

TABLE V

RESPONSES TO THE QUESTION, "DURING THIS PAST YEAR, HAS THE TRAINING YOU RECEIVED IN THE EPDA 553 PROGRAM HELPED THE VOCATIONAL AND TECHNICAL EDUCATION PROGRAM OR PROGRAMS IN OR THROUGH THE INSTITUTION YOU ARE EMPLOYED BY?"*

Percent		
75.4 (n = 52)	Yes, how? (see below)	
	Response	Percent (0 – 100)
	Started new program or programs.	28.8
	Improved old program or programs.	65.4
	Initiated innovative project.	21.2
	Improved instruction staff.	42.3
	Improved community relationships.	44.2
	Other	9.6
24.6 (n = 17)	No, how? (see below)	
	Response	Percent (0 – 100)
	Have not had a chance to use the knowledge I've learned in the EPDA 553 Program.	41.2
	I'm not involved in any vocational or technical program.	17.7
	Other	35.3

*Percents are rounded to the nearest tenth of a percent.

The question represented in Table V went one step further than the question presented in Table IV and asked the participants if the training they received in the EPDA 553 Program helped in the program or

programs in or through the institution in which they were employed. A very favorable response of 75.4 percent said "Yes", and that it was done several ways. For example:

1. Improved old program or programs
2. Improved instruction staff
3. Improved community relationships

The "No" response of 24.6 percent indicated that some participants had not yet had a chance to use the knowledge they gained in the program, or had specific reasons on the "Other" category.

Table VI presents a measurement of some of the specific objectives of the program. It should be noted that the participants had already met some of the objectives before they enrolled in the program. For example, many participants could have easily formulated their own philosophy of vocational technical education before they enrolled. The statement in Table VI was intended to solicit the participants' response as to what extent the items (objectives) in the program had been applied advantageously in their current employment. The two responses rating highest in the "Most Helpful" category showed that 56.3 percent found that there was an opportunity to meet and interact with prominent vocational and technical education leaders. Furthermore, 53.5 percent gained an understanding of the different types of vocational and technical programs offered in Oklahoma. The two responses that had the lowest ratings on the "Most Helpful" category revealed a 22.5 percent response to a philosophy of vocational and technical education and a 26.2 percent response to an ability to interact effectively with representatives from industry, business, or labor.

TABLE VI

RESPONSES TO THE QUESTION, "INDICATE TO WHAT EXTENT THE ITEMS BELOW WERE GAINED THROUGH PARTICIPATION IN THE EPDA 553 PROGRAM AND HAVE HAD A HELPFUL APPLICATION IN YOUR CURRENT EMPLOYMENT."*

MH -- Most Helpful
SH -- Somewhat Helpful
NH -- Not Helpful
NO -- No Opinion

Response	Percent MH	SH	NH	NO
·A philosophy of vocational and technical education.	22.5	67.6	9.9	0.0
·An understanding of the different types of vocational and technical programs offered in Oklahoma.	53.5	36.6	8.5	1.4
·An ability to interact effectively with representatives from industry, business or labor.	26.2	63.0	6.2	4.6
·An ability to assess employment needs and priorities and translate them into vocational and technical programs	31.0	54.2	9.9	4.2
·An ability to interpret the role of vocational and technical education to authoritative decision and policy makers.	29.6	50.7	14.1	5.6
·An understanding of the national, state and local roles and responsibilities for vocational and technical education.	36.6	54.9	7.0	1.4
·An opportunity to meet and interact with prominent vocational and technical leaders in Oklahoma.	56.3	38.0	2.8	1.4
·An ability to communicate effectively with vocational and technical administrators from a variety of institutions (Secondary - University).	46.5	46.5	5.6	1.4
·An understanding of vocational and technical administration procedures.	36.6	53.5	8.5	1.4
·An awareness and understanding of effective program planning, implementation, evaluation, and administration.	40.8	50.7	7.0	1.4

*(n = 71) Percents are rounded to the nearest tenth of a percent.

The statement shown in Table VII sought to determine how helpful the different units of instruction in the program were to the participants in their current positions. The results of this table were similar to the immediate evaluations of the units which were compiled at the completion of each particular unit. With the exception of the unit on

TABLE VII

RESPONSE TO THE STATEMENT,
"INDICATE BELOW THOSE UNITS OF
INSTRUCTION IN THE EPDA 553 PROGRAM YOU ENROLLED
IN THAT WERE HELPFUL TO YOU IN YOUR CURRENT JOBS."*

MH -- Most Helpful
SH -- Somewhat Helpful
NH -- Not Helpful
CR -- Can't Remember

Response	Percent MH	SH	NH	CR
SUMMER				
I. Social Implication for Vocational Technical Education (n = 25)	52.0	44.0	0.0	4.0
II. Political Implications for Vocational Technical Education (n = 26)	57.7	38.5	0.0	3.8
III. Local Responsibilities for Reimbursed Programs (n = 25)	32.0	52.0	12.0	4.0
IV. Economic Implications for Vocational Technical Education (n = 27)	30.0	63.0	3.8	3.8
FALL				
I. Public School Administration (n = 61)	32.8	55.7	11.5	0.0
II. School and Community Relations (n = 61)	45.9	45.9	6.6	1.6
III. Student Service and Adult Education (n = 61)	26.2	57.4	13.1	3.3
IV. Review and Analysis of Research in Occupational Education (n = 61)	19.7	57.4	21.3	1.6
SPRING				
I. Manpower Analysis (n = 63)	30.2	57.1	9.5	3.2
II. Curriculum Development (n = 64)	39.1	48.4	10.9	1.6
III. Program Development (n = 64)	34.4	54.7	9.4	1.6
IV. Trends and Developments in Occupational Education (n = 63)	39.7	50.8	7.9	1.6

*Percents rounded to the nearest tenth of a percent.

"Public School Administration", all percentages increased in the "Most Helpful" category, since the program was first evaluated at the end of the program in 1971. The unit on "Review and Analysis of Research in Occupational Education" remained the lowest in the "Most Helpful" category, while the summer sessions on "Political Implications for Vocational Technical Education" remained the highest in the "Most Helpful" category. The unit on "Social Implications for Vocational Technical Education" produced a substantial increase to again achieve the second highest percentage in the "Most Helpful" category.

The evaluation of the different parts of the organizational structure of the program was based upon the degree of satisfaction expressed by the participants. Table VIII shows that for the most part there was a high degree of satisfaction concerning the various parts listed. Many of the "Unsatisfied" responses can be answered by viewing the responses to question number nine on the participant questionnaire.

From the open-ended question (number nine on the questionnaire) came many suggestions and criticisms for and of the program. A general summary of the responses is given below, but it is recommended that the entire responses in Appendix D be read to gain an appreciation of the purposes of this question.

1. Purpose of the program
2. Topics of the program
3. Organization of the program
4. Instructors
5. Class participation
6. Class material
7. Students

TABLE VIII

RESPONSES TO THE STATEMENT,
"INDICATE BELOW THE EXTENT OF SATISFACTION
YOU FELT WITH THESE PARTS OF THE EPDA 553 PROGRAM."*

VS -- Very Satisfied
S -- Satisfied
U -- Unsatisfied

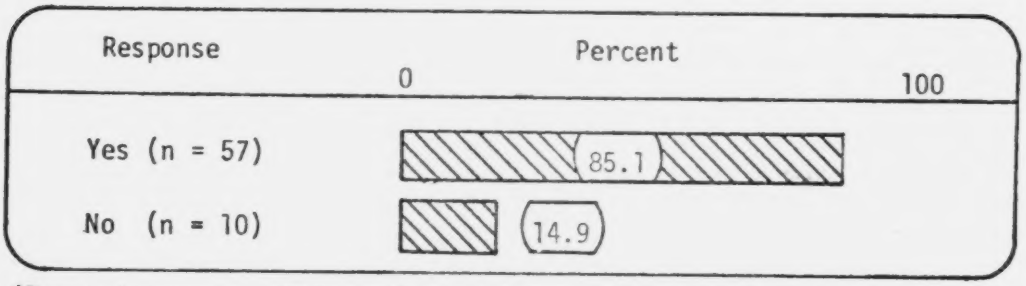
Response	Percent VS	S	U
·Selection of off-campus training sites (Oklahoma City, Tulsa, Duncan) (n = 72)	66.7	30.6	2.8
·Selection of on-campus training site (Oklahoma State University) (n = 68)	60.3	38.2	1.5
·Selection of grading system (A, B, C, or I System) (n = 71)	54.9	40.8	4.2
·Selection of course number and college department (OAED 5340) (n = 68)	47.8	39.1	13.0
·Instruction by many different instructors (n = 71)	53.5	36.6	9.9
·Length and time arrangement for class sessions (n = 71)	50.7	45.1	2.8
·Adequacy of classroom facilities (n = 70)	60.0	38.6	1.4
·Selections of course topics (n = 70)	44.2	45.7	10.0

*Percents are rounded to the nearest tenth of a percent.

The final table of the questionnaire sought to discover if the participants would enroll in a training program similar to the EPDA 553 Program if it were offered again. The responses in Table IX indicate that a very high (85.1) percentage of the participants would. The responses of "Yes" or "No" do represent extremes, however. For this reason, participants were unable to respond with a "Maybe" answer. Five participants did write in "Maybe" or other conditions before they would enroll again.

TABLE IX

RESPONSES TO THE QUESTION, "WOULD YOU ENROLL IN A TRAINING PROGRAM SIMILAR TO THE EPDA 553 PROGRAM IF IT WERE OFFERED AGAIN?"*



*Percents are rounded to the nearest tenth of a percent.

Results from Instructor Interviews

The results below came from 14 interviews with instructors who taught during the fall and spring sessions of the EPDA 553 Program. Due to the time of year that this evaluation was conducted (summer), the limited time allowed for the evaluation, and the purpose of the interviews, these interviews should not be considered a representative sample. These interviews do, however, represent a large portion of the 24 instructors who taught the weekly sessions during the fall and spring session of the 1970 - 1971 academic year. Each of the items below was mentioned by two or more instructors during the interviews.

Program Organization

1. Topic selection for the fall and spring sessions was done by the advisory committee to the EPDA 553 Program for training vocational and technical education administrators. Topics selected were felt to be those necessary to provide an orientation to (1) the different parts of vocational and technical education in Oklahoma, and (2) the training

needs for a vocational and technical education school administrator. Points relevant to the topics selection were:

a. The topics selected should have considered inputs of local vocational and technical education administrators' needs.

b. Some local vocational and technical education administrators may not be aware of what their academic weaknesses are concerning administration.

c. Due to the time allowed for planning of topics in the program, local input from vocational and technical administrators may not have been possible.

2. A strength of the EPDA 553 Program was that the course was taken to the administrators and teachers on local sites.

3. There was a feeling on the part of some instructors that the topics were "one-shot" sessions that were loosely coordinated. Various areas mentioned were:

a. There was a need for better orientation of instructors, especially those outside of vocational and technical education.

b. Some instructors did meet together to coordinate their topics on an individual and department basis.

c. Graduate assistants driving the instructors to and from the off-campus site were helpful to some instructors in orienting them to the program and previous topics.

4. It was felt that the interaction among different departments in the colleges of OSU and the interaction between OSU and the State Department of Vocational and Technical Education had been beneficial for future relations since the program was completed.

Presentation of Topics

1. Different instructors required different amounts of preparation. The variety of preparation can be seen by the following:

   a. Instructors who taught similar courses adapted their course material for their presentations. For some this was only a small effort, but for others it required considerable time.

   b. Some instructors drew their presentations from material or experiences confronted in their daily work. A few instructors felt that this may have made their presentations weak because they did not prepare properly, while others found it effective and useful in their presentations.

2. Not all presentations were well received by the participants. For example:

   a. Some topics were of a particular nature making them difficult to present and make interesting.

   b. The class participation by the participants often varied from one off-campus site to another.

   c. Some instructors found that their ability to adapt their presentation after one class helped to improve their presentation for the next class.

   d. Some instructors felt more class time was necessary to adequately present their topics.

   e. Not having a background in vocational and technical education caused some instructors to have a little difficulty in relating to students.

3. Assignments by instructors varied between fall and spring semester and seemed to be given for a variety of reasons, i.e. to make sure material was understood, for grades, and because he was supposed to.

Reimbursement for Services

1. Most of the instructors felt a professional responsibility to teach in this program. This professional responsibility varied between instructors as follows:

   a. Those instructors who had direct employment or previous connection with vocational and technical education felt an obligation to participate in such programs like the EPDA 553 Program and would have taught for free or less than the $75/session they were paid.
   b. Those instructors who were not connected directly with vocational and technical education often felt only an obligation to teach if the university asked them to, but would not do it again for less than $75/session.

Students in the Program

1. Some instructors who had had a weak orientation to the EPDA 553 Program were unsure of the educational or employment background of the students they were to teach.

   a. The students enrolled did have a wide range of educational experience from undergraduate work to post-doctoral work.
   b. Employment experience of participants ranged from few to many years of experience in vocational and technical education.

2. Some instructors felt it would be good exposure to have vocational and technical education teachers and administrators in the same class.

3. There was the feeling from some instructors that the students did not enroll in the program on their own initiative, but came because they were strongly encouraged to attend.

Off-Campus Sites

1. Nearly all the instructors felt the facilities used for the class sessions were adequate.

   a. The Tulsa facility was mentioned as being somewhat poorly arranged for a classroom, but it was well equipped.

   b. Some instructors were tired the next day after getting back late from the training sites.

2. All the instructors did not mind traveling to different training sites.

Results from Participant Interviews

The results below came from interviews with 22 of the participants who were in different parts of the summer, fall, and spring sessions of the EPDA 553 Program. Due to the time of year that these interviews had to be conducted (summer), the limited time allowed to do the interviews, and the purpose of the interviews, these 22 interviews cannot and are not considered a representative sample of all the participants who were enrolled in the program. They do provide informative thoughts from two or more participants which can be used to provide background information for a broader understanding of the EPDA 553 Program.

Program Topics

1. The different topics presented in the program were more of a survey or orientation of vocational and technical education. This caused some participants to see the program from two perspectives.

   a. Those people who had a background in vocational and technical education often saw some of the presentations as a rehash of material they already knew.

   b. Those people who had a limited background in vocational and technical education often felt the presentations were informative and enjoyable.

2. Since the courses were seen as a survey or orientation, many of the participants felt the topics were "one-shot" in nature. This produced the following:

   a. A desire that interesting and informative topics be given more time.

   b. Some topics were presented in a very narrow scope and, thus, not very informative.

3. Some participants felt the topic areas selected were adequate, but that the scope of the presentation made them irrelevant. This was reflected by the following:

   a. There was a lack of adequate presentations on topics that were needed for participants to perform their jobs.

   b. A need for local input to take the theoretical knowledge and put it into some practical application.

4. Some of the summer sessions were felt to be a highlight of the program. The instructors were informative and knowledgeable about their fields.

5. Some participants mentioned that there was a lack of participation on the part of business and industry.

6. Due to "one-shot" topic presentations, some participants felt there was a lack of coordination among the topics.

Program Instruction

1. Often the material presented in the different class sessions determined the quality of instruction as seen by the participants.

   a. Some material presented in class was a review of old material.

   b. Sometimes the material presented was so theoretical that comprehension was difficult. At other times, there was so much material presented it could not be assimilated fast enough.

   c. Some of the material was poor because the instructors were unprepared or disoriented to what they were supposed to talk about.

2. Because some participants were argumentative about minor items, some instructors' presentations were sidetracked or difficult to present.

   a. There were participants who felt that some instructors knew very little about the particular practical problems of vocational and technical administration.

   b. Area school personnel would dominate the discussion.

3. In many cases the instructors' own personal dynamics made the presentation interesting to the participants. Such things as the following:

a. Using more classroom discussion instead of a lecture.

b. The use of personal experience to present problem situations.

Assignments

1. The assignments were, for the most part, viewed from two perspectives.

a. The assignments appeared to some participants to be busy-work. They felt that assignments were given more for assigning grades and less for a learning experience.

b. Other participants felt that the assignments made them think more after they left the classroom and, thus, caused them to learn more.

c. Sometimes, in both cases above, the participants felt that they were expected to do too much for a three hour course when you include travel, assignments, and presentations.

2. There were participants who felt much more was gained from class discussion than from the assignments.

Influence to Enroll

1. There was a wide range of influencing reasons given for enrolling in the program. Except for the two reasons given below, the others were only briefly mentioned.

a. There was direct encouragement (particularly on area school administrators) from the State Department of Vocational and Technical Education for some administrators to participate.

b. Some of the participants heard about the program from vocational and technical administrators and called the State Department of Vocational and Technical Education to find out about enrolling in the program.

Training Site

1. Distance seems to be a factor in driving to and from the training site. The participants did not seem to mind driving as long as the topics discussed were worthwhile.

2. The classroom facilities were felt to be adequate for classroom instruction.

Participant Interaction

1. There was a feeling by many participants that the interaction with a variety of people was an important part of the program.

a. Some administrators felt that members of their staff enrolled in the program gained a better appreciation of administration.

b. Area school participants and junior college participants felt the interaction has helped build better relations.

c. A few participants thought that the interaction of academic college educators and vocational and technical education personnel was beneficial.

d. For those people new to vocational and technical education, the exposure to the staff from the State Department of Vocational and Technical Education proved helpful in future relations.

2. There were two diverse feelings concerning the types of groups that should have participated in this program.

   a. Some participants felt the heterogeneous grouping of teacher, administrators, etc. added a unique mixture of "much" versus "no" experience concerning vocational and technical education administration.

   b. On the other side, some participants wanted a homogeneous group that could have an indepth concentration on specific needs of vocational and technical education.

Highlights of Panel Discussion

The two discussion panels which met with the consultants served two purposes: (1) a chance for the consultants to gain clarification of various parts of the program from the people who were involved in different phases of the program, and (2) a chance for the people on the panel to gain an understanding of some views of the consultants regarding the program. (A list of the panel members can be found in Appendix B.) Here briefly are the items mentioned during the discussion between the two panels and the consultants.

Oklahoma State University Panel

1. Role of the OSU Graduate College in the EPDA 553 Program
   a. Usefulness of college credit received in the program
2. The results of the participant questionnaire
   a. Favorable responses
   b. Job changes of participants
3. Planning stages in the EPDA 553 Program

a. Primary objectives

b. Unwritten objectives

c. Decision on orientation-type courses

d. Short- vs. long-range goals of the program

e. Advisory committee

f. Selection of topics

4. Interaction of people in the program

a. Teachers with administrators

b. Academic campus instructors with vocational and technical education personnel

c. Area school personnel with junior college personnel

5. Instruction in the program

a. Selection of instructors (criterion or criteria)

b. The background of instructors

c. The preparation of instructors

d. Theoretical vs. applied knowledge presentations

6. Various aspects of the EPDA 553 Program

a. Contrast of summer session to fall and spring sessions

b. Input from local vocational and technical education personnel on course topics.

7. Area school role in vocational and technical education leadership

a. Area school monthly meetings

8. Recommendations for future programs.

State Department of Vocational and Technical Education Panel

1. Input from vocational and technical education administrators
   a. Programs meeting specific needs
   b. Professional Personnel Development Council and its membership
2. Participants in the program
   a. Mixture of participants
   b. Criterion for selection in the EPDA 552 and 553 Programs
3. Various aspects of the EPDA 553 Program
   a. Dissemination of information about the program
   b. Evaluation of participants (grades, papers, participation, and attendance)
   c. Selection of training sites
   d. Ratings given the unit of instruction on research
   e. Salary of instructors
   f. Summer vs. fall and spring course topics
4. Interaction of people in the program
   a. Area school personnel with junior college personnel
   b. State staff with local administrators and teachers
5. Purpose for enrolling in the program
   a. Future as well as present administrators
   b. Influences to enroll from outside sources
6. The selection of instructors
   a. Salary paid instructors
   b. Lack of people from business and industry
7. Future programs in professional leadership in vocational and technical education.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The need for qualified vocational and technical education administrators became apparent during this past decade. The Oklahoma State Department of Vocational and Technical Education recognized this need and entered into a training agreement with Oklahoma State University to provide an upgrading training program through a summer institute and an academic year in-service course. During the summer institute in 1970, thirty fellowship participants were invited to four one-week on-campus courses which dealt with the following indepth units of instruction:

1. Social Implications for Occupational Education
2. Political Implications for Occupational Education
3. Local Responsibilities for Reimbursed Programs
4. Economic Implications for Occupational Education

During the academic year 1970-71, an in-service course with sixty fellowships was conducted at three off-campus sites (Duncan, Tulsa, and Oklahoma City). The course topics were of an orientation nature and covered the following units of instruction:

Fall

1. Public School Administration
2. School and Community Relations
3. Students Service and Adult Education

4. Review and Analysis of Research in Occupational Education

Spring

1. Manpower Analysis
2. Curriculum Development for Vocational and Technical Education
3. Program Planning for Vocational Education
4. Current Trends for Development in Occupational Education

The funds for this upgrading program came from money available under Title II, Part F, Section 553 of the Vocational Education Act of 1968. While there were other projects or programs in addition to the upgrading program for vocational and technical education administrators, this program became the most commonly known. It was often referred to as the EPDA 553 Program. For this reason, the title of "EPDA 553 Program" is used in this report to refer to the upgrading program for vocational and technical education administrators.

While the EPDA 553 Program was in progress, several phases of evaluation were used to monitor the instruction and course content. This provided immediate feedback about the program, but left the need for a long-range evaluation follow-up. An evaluation one year after the completion of the EPDA 553 Program was conducted. This report is the results of that evaluation.

The purpose of the evaluation was to (1) view the objectives of the EPDA 553 Program and see to what extent they had been met, (2) analyze the EPDA 553 Program organization and management, and (3) see what changes could be made to improve future programs like the EPDA 553 Program.

To accomplish these purposes, the evaluation was conducted in three phases. First, a questionnaire was designed and mailed to the 78

participants in the program. A return of 92.3 percent was achieved. Second, interviews with 14 of the instructors and 22 of the participants were conducted to obtain information concerning personal views of the program. With ten participants in the program serving as consultants, the information from the questionnaire and interviews was analyzed at an evaluation meeting. Two panels, one from Oklahoma State University and the other from the Oklahoma State Department of Vocational and Technical Education, were used during the evaluation meeting to provide first-hand knowledge about the program. The areas for conclusions and recommendations were developed from the work done at the evaluation meeting.

Conclusions and Recommendations

Below are the conclusions and recommendations developed from the discussion at the EPDA 553 Program Evaluation Meeting. So that the review of the conclusions can be done easily, a code system from the first letters of the source of the conclusion is used to tell from where the conclusions were drawn. The different sources from which conclusions were drawn are: PQ - Participant Questionnaire; II - Instructor Interviews; PI - Participant Interviews; CD - Consultant Discussion; and PD - Panel Discussion. The conclusions represent both the strengths and the weaknesses of the EPDA 553 Program. The recommendations are presented in a positive direction toward promoting the future professional development of vocational and technical education administrators.

Conclusions

- That a substantial percentage (70.8) of the participants in the EPDA 553 Program enrolled to gain or improve their skills and knowledges as a present or future administrator. (PQ)

- That a large percentage (80.3) of the participants in the EPDA 553 Program did meet their reason for enrolling in the program. (PQ)

- That many of the participants (81.2 percent) would enroll in a training program similar to the EPDA 553 Program if it were offered again. (PQ)

- That there is a need for a strong continued emphasis in the professional development of vocational and technical education administrators. (PD)

> Recommendation I: Programs for the professional development of vocational and technical education administrators can and should be a continuous process.
> -- That workshops be used for in-service training that covers a short period of time.
> -- That courses similar to those of the EPDA 553 Program be used for in-service training that covers a long period of time.

- That some of the objectives of the EPDA 553 Program were unwritten and not conveyed to all of the participants in the program. (PI, CD, PD)

- That the EPDA 553 Program did meet a need and came at an opportune time. (CD, PD)

- That with the exception of "An ability to interact effectively with representatives from industry, business, and labor" and "A philosophy of vocational and technical education" the specific objectives of the program were met. (PQ, PI, CD, PD)

· That the informal advisory committee to this EPDA 553 Program did not consider input from local administrators on program organization. (II, PD)

· That future vocational and technical education administrator programs consider new emerging areas like "career education". (CD)

· That over three-fourths of the participants in the EPDA 553 Program felt the training they received helped the vocational and technical education programs in or through the institutions in which they were employed. (PQ)

> Recommendation II: That future programs for the professional development of vocational and technical education administrators have clear and measurable (when possible) objectives which are drawn from and meet the needs of local administrators.
> -- That objectives be conveyed to the participants in a written form.
> -- That surveys geared to the local administrator level be used to determine needs.

· That the orientation-type courses used in the EPDA 553 Program fall and spring sessions provided an excellent opportunity for the participants of different vocational and technical education backgrounds (i.e., area schools and junior colleges, teachers and administrators) to interact and get to know one another. (PQ, II, PI, CD, PD)

· That the orientation-type course used in the EPDA 553 Program fall and spring sessions caused many participants on different occasions to experience a review of material they already knew. (PI, CD, PD)

· That many of the participants in the EPDA 553 Program had a desire for particular course topics to be covered in more depth and related to practical areas. (PQ, PI, CD, PD)

· That the percentage ratings on the units of instruction indicated that three-fourths of the participants enrolled in different sessions

of the EPDA 553 Program found all the units of instruction to be "Most Helpful" or "Somewhat Helpful" in their current job. (PQ, PI)

> Recommendation III: That future programs for the professional development of vocational and technical education administrators clearly define the relationship between the level of the topics covered (indepth or orientation) and the backgrounds of the participants (homogeneous groups or heterogeneous groups).
> -- That specific indepth topics be covered in homogeneous groups.
> -- That orientation topics (on new material) be presented to either homogeneous groups or heterogeneous groups.

- That the college credit received for participating in the EPDA 553 Program encountered difficulty in being applied toward an advanced degree. (PQ, PI, CD, PD)

- That the application of college credit toward the administrators certificate did not become an important issue until after the program was completed and the requirements for certification had changed. (PQ, PI, CD, PD)

- That the degree of satisfaction with the selection of course number and college department (OAED 5340) had one of the lowest percentages for the category "Very Satisfied" and the highest percentage for the category "Unsatisfied". (PQ)

- That the grading system used in the EPDA 553 Program was difficult to administer due to the limited variety of criterion available to evaluate the participants. (PQ, II, PI, CD, PD)

- That the EPDA 553 Program marked a first in vocational and technical education by taking educational training to the people who needed it. (CD, PD)

- That a high degree of satisfaction was expressed about the selection of on-campus and off-campus training sites. (PQ)

- That the selection of training sites should be designed to fulfill the needs of the participants. (PQ, PI, CD, PD)

· That the EPDA 553 Program used a variety of ways to influence administrators to participate in the program (i.e., division newsletters, personal encouragement). (PQ, II, PI, CD, PD)

Recommendation IV: That the planning and organization of future programs for the professional development of vocational and technical education administrators maximize the benefits of the program to the individual needs of the participants.
-- That college credit be given whenever possible.
-- That the lack of transferability in college credits due to course title or course description be minimized.
-- That the grades given fit the needs for which the participants plan to use the training he has received. (i.e., pass-fail system vs. A, B, C, or I system)
-- That the distance to the training sites be minimized within the constraints of the funds available and the number of participants served.
-- That the final decision to enroll in a training program rest with each individual.

· That the professional responsibility to instruct in the EPDA 553 Program varied from those instructors who had direct contact with vocational and technical education and those instructors who did not. (II, PD)

· That the EPDA 553 Program did not utilize the local vocational and technical education expertise that was present in the participants enrolled. (PQ, CD, PD)

· That the EPDA 553 Program showed some signs of weakness in the coordination between instructors and the preparation put into instructors' presentations. (PQ, PI, II, CD)

· That the handouts and the class assignments given in the EPDA 553 Program varied between instructors and session (summer, fall, or spring). (PQ, PI, II, CD, PD)

Recommendation V: That the selection of instructors in future programs for the professional development of vocational and technical education administrators be done on a basis which fits the objectives of the program.

-- That, whenever possible, local administrator expertise be drawn into the program. (Through advisors, consultants, or instructors)
-- That the instructors background fit the area of their presentation.
-- That, in cases of multi-instructor programs, an orientation meeting for instructors be used to develop coordination between instructors and an understanding of the goals of the program.

APPENDIX A

PARTICIPANT QUESTIONNAIRE

1900

OKLAHOMA STATE UNIVERSITY · STILLWATER

Department of Technical Education
Classroom Building 406
372-6211, Ext. 6287

74074

June 5, 1972

During the summer session of 1970 through the academic year 1970-71 you participated in part or all of a vocational and technical education administration training program called the EPDA 553 Program. While the program was in progress, several phases of evaluation were completed. It has now been more than a year since the EPDA 553 Program completed, and a long term evaluation is needed to obtain a clearer picture of the training you received and its usefulness to you.

Your assistance in completing the enclosed questionnaire can help us to plan in-service training programs for Oklahoma's vocational and technical educators. The questionnaire will require some serious thinking and three to five minutes of your time. Since the time period for this evaluation is limited, a quick response is needed and would be greatly appreciated. The results of yours and other participants' responses to this questionnaire will be analyzed with other data at a summer meeting on July 12-14, 1972, in which 10 of the participants will be asked to serve as consultants. More information about the meeting and an application can be found on the postcard enclosed with this letter.

Thank you for your time and attention in helping us better provide professional services to you and other vocational and technical educators in Oklahoma.

Arch B. Alexander
Deputy Director, State Department
of Vocational and Technical Education

Dr. Donald S. Phillips
Director, EPDA 553 Program

Kenneth L. Ritter
Research Associate, EPDA 553 Program

Enclosures

FOLLOW-UP QUESTIONNAIRE
ON EPDA 553 PROGRAM

NOTE: Some of the questions below will be difficult because they require you to express an opinion. Answer all questions by selecting those items that you feel best represent your thoughts about the EPDA 553 Program. Your honest opinion is the only thing that can make this questionnaire effective.

1. Why did you enroll in the EPDA 553 Program? (Check only one item below.)

_____ To improve my skills and compentencies as a vocational and technical education administrator.
_____ To gain knowledge of vocational and technical education for use in the future as an administrator.
_____ To gain some general knowledge about vocational and technical education.
_____ To improve my classroom teaching by gaining a broader understanding of vocational and technical education administration.
_____ Other (please specify) _____
_____

2. Did the EPDA 553 Program meet your reason for enrolling?

_____ Yes (If "yes" go on to the next question.)
_____ No (If "no" please explain why below.)
_____ Topics discussed were for the most irrelevant.
_____ Instruction was generally poor.
_____ Class participation and interaction was limited.
_____ Other (please specify) _____
_____

3. Is the job you are currently working at different from the one you held at the end of the EPDA 553 Program?

_____ Yes --- How much influence did your participation in the EPDA 553 Program have on changing jobs?
_____ much
_____ some
_____ none

_____ No --- How much influence did your participation in the EPDA 553 Program have on your job performance this past year?
_____ much
_____ some
_____ none

4. How do you feel the knowledge gained in the EPDA 553 Program has been used by you in your employment position this past year?

_____ It was directly applied.
_____ It was indirectly applied.
_____ It was not applied, but might be in the future.
_____ It was not applied and never will be.
_____ Other (please specify) _____
_____

5. During this past year, has the training you received in the EPDA 553 Program helped the vocational and technical education program or programs in or through the institution you are employed by?

_____ Yes, how? (You can check more than one of the items below.)
- _____ Started new program or programs.
- _____ Improved old program or programs.
- _____ Initiated innovative project.
- _____ Improved instruction staff.
- _____ Improved community relationships.
- _____ Other (please specify) _____

_____ No, why? (You can check more than one of the items below.)
- _____ Have not had a chance to use the knowledge I've learned in the EPDA 553 Program.
- _____ I'm not involved in any vocational or technical program.
- _____ Other (please specify) _____

6. Indicate to what extent the items below were gained through participation in the EPDA 553 Program and have had a helpful application in your current employment.

(Check one of these categories on each item.)

MH -- Most Helpful
SH -- Somewhat Helpful
NH -- Not Helpful
NO -- No Opinion

	MH	SH	NH	NO
A. A philosophy of vocational and technical education.	___	___	___	___
B. An understanding of the different types of vocational and technical programs offered in Oklahoma.	___	___	___	___
C. An ability to interact effectively with representatives from industry, business or labor.	___	___	___	___
D. An ability to assess employment needs and priorities and translate them into vocational and technical programs.	___	___	___	___
E. An ability to interpret the role of vocational and technical education to authoritative decision and policy makers.	___	___	___	___
F. An understanding of the national, state and local roles and responsibilities for vocational and technical education.	___	___	___	___

(Question 6 continued on next page.)

6. Continued.

	MH	SH	NH	NO
G. An opportunity to meet and interact with prominent vocational and technical leaders in Oklahoma.	___	___	___	___
H. An ability to communicate effectively with vocational and technical administrators from a variety of institutions (Secondary - University).	___	___	___	___
I. An understanding of vocational and technical administration procedures.	___	___	___	___
J. An awareness and understanding of effective program planning, implementation, evaluation, and administration.	___	___	___	___

7. Indicate below those units of instruction in the EPDA 553 Program you enrolled in that were helpful to you in your current job.

(Check one of these categories on each of the units you were enrolled.)

MH -- Most Helpful
SH -- Somewhat Helpful
NH -- Not Helpful
CR -- Can't Remember

UNITS OF INSTRUCTION	CATEGORIES			
	MH	SH	NH	CR
SUMMER				
I. Social Implication for Vocational Technical Education	___	___	___	___
II. Political Implications for Vocational Technical Education	___	___	___	___
III. Local Responsibilities for Reimbursed Programs	___	___	___	___
IV. Economic Implications for Vocational Technical Education	___	___	___	___
FALL				
I. Public School Administration	___	___	___	___
II. School and Community Relations	___	___	___	___
III. Student Service and Adult Education	___	___	___	___
IV. Review and Analysis of Research in Occupational Education	___	___	___	___
SPRING				
I. Manpower Analysis	___	___	___	___
II. Curriculum Development	___	___	___	___
III. Program Development	___	___	___	___
IV. Trends and Developments in Occupational Education	___	___	___	___

8. Indicate below the extent of satisfaction you felt with these parts of the EPDA 553 Program?

(Check one of these categories on each part.)

VS -- Very Satisfied
S -- Satisfied
U -- Unsatisfied

		VS	S	U
A.	Selection of off campus training sites (Oklahoma City, Tulsa, Duncan)	____	____	____
B.	Selection of on campus training site (Oklahoma State University)	____	____	____
C.	Selection of grading system (A, B, C, or I System)	____	____	____
D.	Selection of course number and college department (OAED 5340)	____	____	____
E.	Instruction by many different instructors	____	____	____
F.	Length and time arrangement for class sessions	____	____	____
G.	Adequacy of classroom facilities	____	____	____
H.	Selections of course topics	____	____	____

9. List at least two ways you feel in-service training programs like the EPDA 553 Program can be improved.

A. _____

_____

B. _____

_____

10. Would you enroll in a training program similiar to the EPDA 553 Program if it were offered again?

____ Yes
____ No

(THANK YOU FOR YOUR TIME AND EFFORT. TO MAIL: REFOLD QUESTIONNAIRE THREE WAYS (OUR RETURN ADDRESS IS ON THE BACK) AND WET SEALS.)

REMINDER POSTCARD

Dear EPDA 553 Participant:

You were recently sent a questionnaire that is aimed at evaluating the vocational and technical education administration course you were enrolled in sometime between the summer of 1970 to the spring of 1971. Your assistance in completing the questionnaire and returning it to us will help us better plan in-service training programs in the future. We appreciate any time you could give us in making this evaluation a success. If you have already returned your questionnaire, thank you!

Kenneth Ritter
Research Associate
EPDA 553 Program

APPENDIX B

EPDA 553 PROGRAM EVALUATION MEETING

1907

AGENDA

EPDA 553 PROGRAM EVALUATION MEETING

Wednesday, July 12, 1972

9:00 a.m. - 11:00 a.m.	1. Introduction fo consultants. 2. Filling out needed information on consultants.
(15 minute break)	3. Explaining the purpose and expectations of consultants. 4. Beginning analysis of questionnaire.
11:00 a.m. - 12:00 p.m.	5. Overview of EPDA 553 Program
12:00 p.m. - 1:00 p.m.	Break for lunch
1:00 p.m. - 4:00 p.m.	1. Continue analysis of questionnaire. 2. Analyze results of interview.
(15 minute break)	3. Have consultants formulate questions on all aspects of EPDA 553 Program. 4. Finalize questions for consultants.

Thursday, July 13, 1972

9:00 a.m. - 1:00 p.m.	Open Time
1:00 p.m. - 4:00 p.m.	1. Panel consisting of personnel from the School of Occupational and Adult Education and the Graduate College at Oklahoma State University meeting with consultants.
(15 minute break)	*a. Dr. Donald Phillips b. Dr. Lloyd Wiggins c. Dr. Lloyd Briggs d. Dr. Odell Walker
4:00 p.m. - 6:30 p.m.	Break for Dinner
6:30 p.m. - 9:30 p.m.	1. Panel consisting of personnel from the Oklahoma State Department of Vocational and Technical Education meeting with consultants.
(15 minute break)	*a. Mr. Arch Alexander b. Dr. Bill Stevenson c. Mr. Terry Spradley d. Mr. Joe Kinzer e. Mrs. Muriel Tapman

Friday, July 14, 1972

9:00 a.m. - 12:00 p.m.	1. Finalize recommendations into written form.
(15 minute break)	2. Complete reimbursement information.

*Acting chairman for panel.

LIST OF CONSULTANTS TO THE
EPDA 553 PROGRAM EVALUATION MEETING

1. Mr. Leon Applegate, Instructor
   Vocational Agriculture
   Sand Springs, Oklahoma

2. Mr. Roy Byrd, Department Head
   Technical Education
   Cameron State College
   Lawton, Oklahoma

3. Mr. Kenneth Carleton
   Superintendent
   Mid-America Area Vo-Tech School
   Wayne, Oklahoma

4. Mr. J. R. Gililland
   Superintendent
   Canadian Valley Area Vo-Tech School
   El Reno, Oklahoma

5. Miss Larry Ann Holley
   Cosmetology Instructor
   Central Oklahoma Area Vo-Tech School
   Drumright, Oklahoma

6. Mr. Robert Keck, Dean
   Vocational Technical Education
   Eastern Oklahoma State College
   Wilburton, Oklahoma

7. Mr. Loyd Parker, Instructor
   Vocational Agriculture
   Norman Public Schools
   Norman, Oklahoma

8. Mr. Charles Parr
   I.C.T. Coordinator
   Duncan Area Vo-Tech School
   Duncan, Oklahoma

9. Mr. Bill Powers
   Superintendent
   Kiamichi Area Vo-Tech School
   Wilburton, Oklahoma

10. Mrs. JoAnne Ruark, Research Assistant
    Research, Planning, and Evaluation Division
    State Department of Vocational and Technical Education
    Stillwater, Oklahoma

PANELS FOR THE EPDA 553
PROGRAM EVALUATION MEETING

Oklahoma State University Panel

Dr. Donald Phillips, Professor and Head
Technical Education
Oklahoma State University

Dr. Lloyd Wiggins, Associate Professor
Occupational and Adult Education
Oklahoma State University

Dr. Lloyd Briggs, Associate Professor
Technical Education
Oklahoma State University

Dr. Odell Walker, Assistant Dean
Graduate College
Oklahoma State University

Oklahoma State Department of Vocational and Technical Education Panel

Mr. Arch Alexander, Deputy State Director
Oklahoma State Department of Vocational and Technical Education

Dr. Bill Stevenson, Assistant State Director
Oklahoma State Department of Vocational and Technical Education

Dr. Terry Spradley, Coordinator
Educational Personnel Development Projects
Oklahoma State Department of Vocational and Technical Education

Dr. Joe Kinzer, Coordinator
School-Industry Exchange Program
Oklahoma State Department of Vocational and Technical Education

Mrs. Muriel S. Tapman
Vocational Education Personnel Branch
Division of Program Resources
Department of Health, Education, and Welfare
Washington, D.C.

APPENDIX C

"OTHER" RESPONSES TO PARTICIPANT QUESTIONNAIRE

1911

Response Question #1 "Other"

State staff request for future need for certification.

In order to quality for a Vo-Tech administrative certificate.

Response Question #2 "Other"

State (OSU) College of Education would not accept this credit for administrative certification.

Wrong persons were doing the teaching.

The program was too general.

The courses and instruction could have been more realistic and practical.

The summer programs were excellent, but many of the programs during the school year were irrelevant.

The program is not recognized by the education department in obtaining an administrative certificate.

There was a domination of classes by the area Vo-Tech schools administrators.

There was too much of a shotgun approach.

To some extent I enjoyed all of it and learned much I'm sure.

The program could have spent more time in some subject areas.

Although it helped me, it was my understanding when enrolling the hours would count toward an administrative certificate.

Most of the items discussed were repeats of former courses.

It was about the same information I'd had earlier in other courses.

Response Question #4 "Other"

It applied in limited degrees.

The ideas brought out by the group discussions have been tried to a small extent.

No new knowledge gained from the course.

Response Question #5 "Yes, Other"

The training helped in establishing two teacher departments.

It helped me have a better understanding of the "what" and "why" of vocational education.

The training helped in our youth organization.

Program is not in operation at this time.

With the information gained I have been able to promote Vo-Tech education more ably.

No programs as yet; it will help.

The training provided a better understanding of administrative problems.

Response Question #5 "No, Other"

The information given was mostly a review of what I had already covered.

The information in many cases was too broad and not specific enough.

I'm not employed. I'm an EPDA 552 doctoral student.

No new knowledge gained from the course

Did not gain any useful information.

APPENDIX D

RESPONSES TO QUESTION NUMBER
NINE OF PARTICIPANT QUESTIONNAIRE

1914

RESPONSES TO THE STATEMENT: "LIST AT LEAST TWO WAYS YOU FEEL IN-SERVICE TRAINING PROGRAMS, LIKE THE EPDA 553 PROGRAM, CAN BE IMPROVED."

I. Purpose of the Program

1. We need in-service training programs every year.
2. Provide for growth through a continuation of that kind of training.
3. The course to be offered more frequently allowing more time in each area.
4. Offer them more often and to a larger group of participants.
5. That these programs be of a more frequent nature in order to stay abreast of change.
6. Have more of them.
7. By reaching the vocational educator as well as the administrator.
8. Perhaps could offer more specialized training for particular teacher groups.
9. By offering a condensed version of the subject matter to the "teacher."
10. Give more people an opportunity to apply for the full year training toward advanced degree.
11. Provide some means for credit to be counted on advanced degree.
12. By arranging with OSU College of Education for these classes to count toward the administrators certificate.
13. Set up specific courses in local areas to help those who need courses for certification.
14. I feel that a course name should be given to the course. If worth spending the time it is worth 3 hours of credit at our college.
15. Need more communication between the college of occupational education and College of Education so the course can be applied in areas where needed. Need a course description understood by both colleges at OSU.

16. Course number offered should apply directly to requirements for Administrative Certificate.

17. Let apply toward certificate.

18. To be more relevant for Vo-Tech administrators.

19. There were a few lectures that were of no real value to me -- were not prepared to fit the course.

20. Do not pressure people to enroll if they do not need credit and feel their years of experience in Vocational Education are such that most of the material covered will be only a "re-hash" of previous courses.

21. Have a specific objective in mind and zero in on meeting it.

II. Topics of the Programs

1. Concentration on one area for a greater amount of time.

2. More classtime on each individual subject.

3. I feel that in-service training programs could be improved by spending more time on the level of group solving and discussion of problems.

4. More depth in some areas (Financing - Legal).

5. Fewer topics - therefore more time to explore particular areas.

6. Each session should focus on a specific topic and not generalize.

7. Try to cover less material in lots of areas and concentrate in about three main areas with some indepth study.

8. Longer sessions with instructors like H. McDonald.

9. More time and information on financing and budgets.

10. Broaden the individual topics into courses.

11. Covering a more specific subject rather than broad subject or topics.

12. Consider the same total content, but offer some more opportunity to pursue particular interests and/or needs.

13. With a more definite approach on selection of curriculum to meet the immediate problems that face the Vo-Tech Administrator.

14. More on direct problems dealing with administration.

15. Have the students assist in the selection of the topics if at all possible.

16. Information could come from the "firing line", people working daily in administrative Vo-Tech positions.

17. School laws relating to Area Vo-Tech Schools; State Board policies relating to Area Vo-Tech Schools.

18. Additional information concerning public school law as it relates to Vo-Tech teacher education.

19. More on Public Relations

20. Knowledge of community power structures.

21. Less on Research material, more on the practical aspects; every day problems.

22. Continuing information on manpower supply and demand.

23. Awareness of need for program planning.

24. Extend opportunity of participants in curriculum offering.

25. More lessons regarding classroom instruction.

26. To point out ways of updating training equipment in the shops.

27. It was diversified in curriculum selection.

28. Proper and adequate use of Data Processing System of finance; school laws relating to financing Area Vo-Tech Schools.

29. More accurate information as to application of information.

30. Keyed more to Oklahoma.

III. Organization of Program

1. More campus training sites.

2. Five training sites instead of three.

3. Selection of training sites in southeastern Oklahoma; more reasonable and logical for one teacher to travel the distance rather than 20-30 students.

4. Using smaller groups meeting in area sites where the driving time is reduced.

5. More representatives from industry.

6. More participation with personnel from various industries.

7. Use business and industry people more since our products will be employed by them.

8. Bring more people from business and industry to sessions rather than professional educators.

9. Representatives from business, industry, and labor should be used more in the program.

10. More public relations with prospective employers.

11. Use more people from industry.

12. Include more comprehensive high school people - also junior college.

13. Allowing administrators of area schools to discuss methods of operations that are successful for them.

14. In-service and/or on-the-job training - actual participation in a training institution or agency.

15. Involvement of local, state, national power figure (politicians).

16. Vocational and Technical Education - local, state, and national training programs (Veterans - BTA, etc.).

17. The monthly (group) session was sometimes very short for the length of time involved in travel.

18. The local sessions were more informative than the once-a-month sessions at OSU; at times the long trip to OSU seemed fruitless.

19. More effective and interesting Saturday speakers.

20. I feel that the course could be put in a Saturday session and cover the material need at Stillwater or Duncan or anywhere else.

21. Saturday speakers of national stature were most helpful.

22. By breaking into group sessions of ten to twelve; have reports on all areas from these group sessions.

23. Limit the size of the class.

24. Requesting each of the Vo-Tech divisions to send out announcements in their regular mailing concerning the in-service programs of Vo-Tech OSU courses.

25. Devote more time to placement of the finished product. What do you do with the 1st, 2nd, 3rd, 4th, and 5th year follow-up?

26. Improved instruction, scheduling, and curriculum.

IV. Instructors

1. By using more administrators of area schools for instructors - the men who have actually come in contact with problems of the Vo-Tech school administration.

2. Choose instructors who have been knowledgeable concerning vocational education and its particular needs for longer than a few weeks.

3. Don't use any instructors who don't know anything about Vo-Tech education.

4. All instructors should be oriented to vocational education philosophy.

5. Use instructors that have actual present-day experience in vocational-technical administration.

6. More instruction by the people that are actively involved with the area being studied.

7. Make sure instructors are knowledgeable about Oklahoma problems.

8. Pre-in-service training for the total instruction staff.

9. A different instructor for each topic was very good. However, it would be more beneficial and interesting if topics and instructors were more closely correlated.

10. Better coordination of instruction - make sure instructors do their job, not just handouts to read.

11. The instruction range was too wide; from superior to poor.

12. The traveling instructors needed more coordination, one to another. Each seemed unfamiliar with past sessions.

13. Better choice of instructors.

14. Stress to the instructors that a more stimulating method of instruction needs to be used. A few instructors were very boring.

15. I felt that several of the instructors were ill-prepared. This area should be improved.

16. Selection of instructors that have greater and more relevant experience than what 2 or 3 had.

17. Have off-campus lecturers better prepared.

18. Urge instructors to use practical information and steer away from "same old stuff".

19. More instruction by practitioners and less by theorists.

20. Use less instructors from the department of education.

21. More instruction from outside field of education.

22. Would like to see state representatives and senators attend some sessions.

23. Knowledgeable selection of instructors were selected.

24. Identify a little more specifically the topics guest speakers are to cover.

V. Class Participation

1. More open discussion and less lecture-type of instruction.

2. More interaction among instructors and students.

3. Let the students have more round-table type discussions.

4. Involve the students more---less lecture, more "doing" projects.

5. More interaction between participants.

6. Role-playing in circumstances that a Vo-Tech administrator might become involved in.

7. Sessions in which people in various positions review problems related to their job and how they disposed of them.

8. Participant participation in planning.

VI. Class Material

1. Because most people involved have full-time jobs, limit the amount of outside written assignments.

2. Too much outside paperwork for which I did not have adequate time to work on so did not get enough value from them.

3. Do away with the busywork when you are teaching adults that have full-time jobs.

4. Do not see need in writing paper to express an opinion which may or may not agree with instructor.

5. Printed material handed out that would supplement material given during session.

VII. Students

1. Categorize enrollees so that such broad differences in needed training would not exist.

2. I suggest two groups - one for administrators and one for teachers; some on each are reluctant to voice opinions.

3. Limit the number of Area Vo-Tech school administrators.

4. Would like to see some of the actual local board members of the Vo-Tech schools attend sessions.

5. Encourage more participation by comprehensive high school administrators.

6. Expand to a wider, more varied group of people.

VT 017 570
STATEWIDE COMPUTERIZED MODEL FOR DETERMINING OCCUPATIONAL OPPORTUNITIES IN NEBRASKA. 1972 REPORT.

NEBRASKA OCCUPATIONAL NEEDS RESEARCH COORDINATING UNIT, JEFFERSON CITY.;NEBRASKA STATE DEPT. OF EDUCATION, LINCOLN. DIV. OF VOCATIONAL EDUCATION..
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DESCRIPTORS - *STATE SURVEYS; *OCCUPATIONAL SURVEYS; *EMPLOYMENT PROJECTIONS; *MANPOWER NEEDS; *OCCUPATIONS; OCCUPATIONAL INFORMATION
IDENTIFIERS - *NEBRASKA

ABSTRACT - ONE OF FIVE STUDIES PUBLISHED ANNUALLY IN NEBRASKA, THIS SURVEY EXAMINES THE MANPOWER NEEDS AND JOB OPPORTUNITIES WITHIN THE STATE. INTERVIEWS WITH A RANDOM SAMPLE OF ADMINISTRATORS OF NEBRASKA FIRMS SUPPLIED THE DATA. FINDINGS REVEALED THAT 78,522 PERSONS WILL BE NEEDED TO FILL NEXT YEAR'S EMPLOYMENT SLOTS, AND 94,798 WILL BE NEEDED THE FOLLOWING TWO YEARS. THE GREATEST MANPOWER NEEDS WILL EXIST IN THESE CONSECUTIVELY ORDERED AREAS: (1) DISTRIBUTIVE OCCUPATIONS, (2) TRADE AND INDUSTRIAL OCCUPATIONS; (3) AGRICULTURAL OCCUPATIONS, (4) OFFICE OCCUPATIONS, (5) HOME ECONOMICS OCCUPATIONS, AND (6) HEALTH OCCUPATIONS. TABLES AND GRAPHS ARE INCLUDED. (AN)

VT 017 570

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From

STATE–WIDE COMPUTERIZED MODEL FOR DETERMINING OCCUPATIONAL OPPORTUNITIES IN NEBRASKA

June, 1972

By
NEBRASKA RESEARCH COORDINATING UNIT
FOR VOCATIONAL EDUCATION
University of Nebraska
In Cooperation With
State Department of Education
Division of Vocational Education

Research Staff

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1923

REPORT OF
STATE–WIDE MODEL FOR DETERMINING
OCCUPATIONAL OPPORTUNITIES IN NEBRASKA

SUMMARY

INTRODUCTION

This is the fifth in a series of annual studies, designed to identify the need for employees in the state of Nebraska. The emphasis of this study has been to determine specific manpower needs and job opportunities in the state. This objective has been fulfilled by asking employers throughout the state the number of persons they presently employ, to estimate their future manpower needs in relation to expansion, retirement, promotion and turnover for the next twelve months, and further need for the following two years. The data supplied by the employers as job titles were then classified into instructional training areas requiring similar educational preparation and occupational competencies.

PROCEDURE

The data gathering procedure for the 1972 study remained, basically, the same as in previous studies. The data gathering instrument was the same as the one used in the 1971 study to allow for uniformity in the coding procedure and better correlation with the preceding studies.

A three percent computerized random selection of firms was drawn from the Master Population Listing, and the data was gathered by personal interviews. The interviewing was done by students attending the University of Nebraska, at Lincoln. The sources which were used to compile the original master population list were: (1) IRS 941 (firms employing one or more persons); (2) IRS 942 (domestic help); (3) IRS 943 (farmers and ranchers employing hired labor); (4) the Employment Security Division of the State Department of Labor (out-of-state firms which have in-state locations, in addition to the federal, state, local and tax exempt agencies); and (5) the State Tax Commissioner (the State Business Master File for updating purposes).

For this study, an up-dating of the master population list was done by the removal of firms no longer in existence by using a compiled list of firms from the Employment Security Division of the Department of Labor (ES 202) and out-of-business firms determined from interviews for previous studies. New firms were added to the master population list by using new firm listings (ES 202) from the Employment Security Division, State Department of Labor.

The publication, *VOCATIONAL EDUCATION AND OCCUPATIONS*[1] provided the basis for coordinating job titles with instructional training areas.

DELIMITATIONS

A delimitation of this study is that it was not possible to obtain a current master population listing for this report. Partial up-dating was done by using information obtained from the Department of Labor, Employment Security Division.

No allowance was made for the seasonal labor "peaks" and "lows" common in work areas. All part-time and seasonal employees were equated in terms of full-time equivalents.

The fluctuations caused by small sampling accounts for variations in certain instructional training areas from one year to another. This variation is evident when comparing all five studies.

Another delimitation common to all five studies is that the data has been obtained exclusively from employers. Employers tend to over- or underestimate, depending on labor and economic trends.

FINDINGS

The data in the 1972 study, when compared with studies of previous years, show a downward trend in overall employment. However, when the data are compiled into the five year summary, the results are compatible with those presented by the Nebraska Department of Labor, *NEBRASKA OUTLOOK FOR SELECTED OCCUPATIONS*, Interim Report, May, 1972.[2]

SUMMARY BY MAJOR VOCATIONAL TECHNICAL AREA

Presented in Table 1 are totals of the 1972 study by major vocational technical area. The data for each area are taken from Tables 2 through 8 inclusively.

The total number of persons shown by projected employment in all instructional training areas is 510,280, including self-employed farmers. Future needs are projected as 78,522 persons for the next twelve months and 94,798 persons for the following two years.

Trade and Industrial Occupations represents the largest projected employment with 152,466 persons presently employed or 29.9 percent of the total projected present employment. Distributive Occupations has 121,069 persons employed, representing 23.7 percent of the total and Agricultural Occupations has 92,765 persons employed representing 18.2 percent of the total projected present employment. The Office Occupations area has 70,515 persons employed, representing 13.8 percent of the total and

[1]U.S. Office of Education, *VOCATIONAL EDUCATION AND OCCUPATIONS OE-80061.* U.S. Government Printing Office, Washington, 1969.

[2]Nebraska Department of Labor, *NEBRASKA OUTLOOK FOR SELECTED OCCUPATIONS*, Interim Report. Division of Employment, Lincoln, May, 1972.

Other Occupations (all persons not classified by a specific occupation area) has 42,107 persons employed, representing 8.3 percent of the total. Home Economics Occupations has 3.5 percent of the total and Health Occupations represents 2.6 percent of the total, comprising the remainder of the projected present employment.

The greatest need projected for the next twelve months is in Trade and Industrial Occupations at 26,546 persons, representing 33.8 percent of the total need. Distributive Occupations will need 23,432 persons during this same period representing 29.8 percent of the total need and Agricultural Occupations will need 9,558 persons or 12.1 percent of the total. Office Occupations will need 7,271 persons, or 9.3 percent of the total, and Other Occupations will need 7,232 persons, or 9.2 percent of the total. The need projected in Home Economics Occupations is 3,030 persons or 3.9 percent of the total and Health Occupations is 1,453 persons or 1.9 percent of the total need for the twelve month period.

During the following two years the greatest need will be in the area of Distributive Occupations, 36,086 persons, or 38.1 percent of the total need; Trade and Industrial Occupations, 28,405 persons, or 30.0 percent of the total and Agricultural Occupations, 10,952 or 11.5 percent of the total. Other Occupations will need 9,294 persons during this period or 9.8 percent of the total and Office Occupations will need 8,971 persons or 9.5 percent of the total. Home Economics Occupations and Health Occupations will require .6 percent and .5 percent, respectively, of the total projected employment need.

TABLE 1
SUMMARY BY MAJOR VOCATIONAL TECHNICAL AREA

	Now Employed		Future Needs			
			Next 12 Months		Following 2 Years	
	Number	Percentage of Total	Number	Percentage of Total	Number	Percentage of Total
Agricultural Occupations	92,765[a]	18.2	9,558[b]	12.1	10,952[b]	11.5
Distributive Occupations	121,069	23.7	23,432	29.8	36,086	38.1
Health Occupations	13,456	2.6	1,453	1.9	484	.5
Home Economics Occupations	17,902	3.5	3,030	3.9	606	.6
Office Occupations	70,515	13.8	7,271	9.3	8,971	9.5
Trade and Industrial Occupations	152,466	29.9	26,546	33.8	28,405	30.0
Other Occupations	42,107	8.3	7,232	9.2	9,294	9.8
Totals	510,280	100.0	78,522	100.0	94,798	100.0

[a] Nebraska Department of Agriculture, *Nebraska Agricultural Statistics Annual Report*, 1965, (Lincoln: State-Federal Division of Agriculture Statistics, May, 1967), p. 109.

[b] Douglas Genereaux, *Annual Estimated Replacement Farmer Opportunities in Nebraska*, Agricultural Education Departmental Report No. 3, (Lincoln: University of Nebraska, March, 1967), p. 6 (Mimeographed).

AGRICULTURAL OCCUPATIONS

Agricultural Occupations may include one or any combination of the following functions: agricultural production, agricultural supplies, agricultural mechanization, agricultural products (processing), ornamental horticulture, forestry, agricultural resources, and related services. Emphasis in instruction is designed to provide opportunities or improve competencies in functions of agricultural occupations.

Included in the total projected employment of 92,765 persons in Agricultural Occupations (Table 2) is 53,852 self-employed farmers. The master population of firms contains only 18,148 farmers that employ workers, making it necessary to supplement this figure with the number of farmers who do not employ additional workers. The study, *NEBRASKA AGRICULTURAL STATISTICS*[3] estimates the number of self-employed farmers in the state of Nebraska. In order to estimate the need for future production agricultural workers another source was used to complete the total projected number of workers needed. The Genereaux[4] study used a formula based upon census data and provided the figure of 951 workers needed annually. This formula made allowances for consolidation of farms, age of farmers, and age of farmers at retirement.

[3] Nebraska Department of Agriculture, *NEBRASKA AGRICULTURAL STATISTICS ANNUAL REPORT, 1966*, Preliminary, 1967, (Lincoln: State-Federal Division of Agricultural Statistics, May, 1967), p. 109.

[4] Douglas Genereaux, *ANNUAL ESTIMATED REPLACEMENT FARMER OPPORTUNITIES IN NEBRASKA*, Agricultural Education Departmental Report No. 3, (Lincoln: University of Nebraska, March, 1967), p. 6 (Mimeographed).

TABLE 2

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN AGRICULTURAL OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Professional 1	14	929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	40
Managerial 2	21	1,172	1	40	0	0	1	40	0	0	0	0	0	0	1	40	0	0	1	40
Agricultural Production 3	423	21,983	69	4,930	23	1,374	3	121	0	0	43	3,435	5	242	16	849	48	3,839	56	4,688
Self Employed Farmers 3a		53,852*	0	951*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902*
Agricultural Supplies/Services 4	71	5,415	13	849	6	364	0	0	0	0	7	485	1	40	5	324	7	485	8	404
Agricultural Mechanics 5	25	2,020	7	323	3	121	1	40	0	0	3	162	0	0	4	202	3	121	5	323
Agricultural Products (Processing, Inspection & Marketing) 6	41	4,768	15	1,374	5	364	2	121	0	0	8	889	0	0	2	202	13	1,172	11	1,616
Ornamental Horticulture (Production, Processing, Marketing and Services) 7	23	1,374	5	808	2	242	0	0	0	0	3	566	1	40	0	0	4	768	5	1,616
Agricultural Resources (Conservation, Utilization, and Services) 8	12	1,212	6	283	2	121	2	81	0	0	2	81	2	122	1	40	3	121	4	323
Forestry (Production, Processing, Management, Marketing, and Services) 9	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	631	92,765	116	9,558	41	2,586	9	403	0	0	66	5,618	9	444	29	1,657	78	6,506	91	10,952

*Number of employers reporting employees in each cell.

[a]Nebraska Department of Agriculture, *Nebraska Agricultural Statistics Annual Report, loc. cit.*

[b]Genereaux, Douglas, *loc. cit.*

The total projected employment in the agricultural instructional training areas is 92,765. The largest projection of presently employed is in the instructional training area of agricultural production, 21,983, excluding the 53,852 self-employed farmers. The next largest projected employment is in the area of agricultural supplies and services, 5,415, followed by agricultural products (processing, inspection, and marketing), 4,768.

Employment opportunities in agricultural production, 4,930, are projected as the greatest need during the next twelve months, followed by agricultural products (processing, inspection, and marketing), 1,374. Replacement due to turnover and expansion will come from new employees and outside firm employees. Agricultural production projected the greatest need for new employees, followed by agricultural products (processing, inspection, and marketing).

During the following two years the greatest projected need is anticipated in the areas of agricultural production, 4,688; agricultural products, (processing, inspection and marketing), 1,616; and ornamental horticulture (production, processing, marketing and services), 1,616.

DISTRIBUTIVE OCCUPATIONS

Distributive Occupations include one or any combination of the following instructional training areas in economic activity of retail and wholesale trade, finance, insurance, real estate, services and service trades, manufacturing, transportation, utilities and communications. These instructional training areas are designed to improve competencies in Distributive Occupations.

The total projected employment of Distributive Occupations is 121,069 persons (Table 3). The largest projection of presently employed is in the instructional training area of transportation with 20,771 persons employed. Other instructional training areas projecting a larger number of persons employed are general merchandise, 17,740; apparel and accessories, 11,355; food distribution, 8,809; and petroleum, 8,001.

During the next twelve months the greatest projected need will be due to turnover and expansion, with the largest part of the supply coming from new employees.. The instructional training areas projecting the greatest need are general merchandise, 5,374; transportation, 4,607; apparel and accessories, 2,505; and recreation and tourism, 2,101.

The greatest projected need in the following two years is in the instructional training areas of general merchandise, 6,910; home furnishings, 6,344; transportation, 5,577; and recreation and tourism, 4,122.

TABLE 3

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN DISTRIBUTIVE OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months														The Following 2 Years	
			Total Needed		Reason for Need						Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Professional 1	4	970	1	808	1	808	0	0	0	0	0	0	0	0	1	808	0	0	0	0
Managerial 2	64	4,849	3	403	1	40	0	0	1	323	1	40	2	363	1	40	0	0	2	364
Advertising Services 3	23	3,233	2	121	1	81	0	0	0	0	1	40	0	0	0	0	2	121	3	202
Apparel and Accessories 4	42	11,355	9	2,505	2	121	0	0	1	81	6	2,303	0	0	2	80	7	2,425	6	2,748
Automotive 5	58	4,890	11	525	6	283	0	0	1	40	4	202	0	0	9	404	2	121	11	606
Finance and Credit 6	62	6,264	10	444	5	242	3	121	2	81	0	0	3	121	5	242	2	81	6	323
Floristry 7	17	1,455	4	364	2	202	0	0	0	0	2	162	0	0	0	0	4	364	5	404
Food Distribution 8	113	8,809	25	1,576	4	202	0	0	0	0	21	1,374	1	40	2	81	22	1,455	19	2,101
Food Services 9	58	4,728	5	929	1	81	1	40	0	0	3	808	0	0	0	0	5	929	4	1,536
General Merchandise 10	79	17,740	25	5,374	7	485	1	40	0	0	17	4,849	0	0	6	3,556	19	1,818	18	6,910
Hardware, Building Materials, Farm and Garden Supplies & Equip. 11	96	6,223	11	808	8	323	0	0	0	0	3	485	0	0	2	81	9	727	10	1,212
Home Furnishings 12	40	2,627	6	444	3	323	0	0	0	0	3	121	0	0	0	0	6	444	6	6,344
Hotel and Lodging 13	14	808	1	40	0	0	0	0	0	0	1	40	0	0	0	0	1	40	1	81
Industrial Marketing 14	26	2,263	3	161	1	81	1	40	0	0	1	40	0	0	2	121	1	40	9	364
Insurance 15	46	4,688	9	363	8	323	0	0	0	0	1	40	0	0	6	242	3	121	4	162
International Trade 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal Services 17	17	1,091	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	323
Petroleum 18	115	8,001	27	1,657	8	364	0	0	0	0	19	1,293	0	0	7	323	20	1,334	22	2,182
Real Estate 19	25	4,768	2	202	1	40	0	0	0	0	1	162	0	0	1	121	1	81	5	525
Recreation and Tourism 20	28	5,536	7	2,101	1	81	0	0	0	0	6	2,020	2	80	1	162	4	1,859	9	4,122
Transportation 21	122	20,771	44	4,607	11	889	0	0	0	0	33	3,718	1	40	10	566	30	4,001	37	5,577
Totals	1,049	121,069	205	23,432	71	4,969	6	241	5	525	123	17,697	9	644	55	6,827	138	15,961	178	36,086

*Number of employers reporting employees in each cell.

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HEALTH OCCUPATIONS

For persons interested in Health Occupations there are instructional training areas with preparation for occupations that render health services directly to patients in appropriate clinical situations and those that render health services which do not involve direct services to patients but use laboratories and/or appropriate work situations.

Health Occupations projects 13,456 persons presently employed as reflected in Table 4. The largest number of projected employment in Health Occupations is in the instructional training area of nursing, 5,981, (excluding registered nurses). The medical professional instructional training area accounts for 4,122 of the projected employment with additional employment in the area of dental professional of 606. The instructional training area of laboratory technology projected employment of 1,091 persons, while dental assisting projected employment of 970 persons.

Replacement needs for the next twelve months due to turnover and expansion will come from outside the firm. The largest projected need will be in the instructional training area of nursing (excluding registered nurses), during the next twelve months and the following two years.

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TABLE 4

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN HEALTH OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Dental:																				
Professional 1	14	606	1	40	1	40	0	0	0	0	0	0	0	0	1	40	0	0	0	0
Managerial 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dental Assisting 3	16	970	3	121	1	40	0	0	0	0	2	81	0	0	1	40	2	81	0	0
Dental Hygiene (Assoc. Degree) ..4	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dental Laboratory Technology ..5	3	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Medical:																				
Professional 6	68	4,122	3	161	2	121	0	0	1	40	0	0	0	0	3	161	0	0	1	40
Managerial 7	4	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laboratory Technology 8	14	1,091	1	81	0	0	0	0	0	0	1	81	0	0	1	81	0	0	1	40
Nursing (Excluding RN's) 9	26	5,981	8	1,050	1	242	0	0	1	81	6	727	0	0	6	767	2	283	3	404
Rehabilitation 10	2	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radiologic 11	1	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophthalmic 12	3	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Health 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mental Health Technology 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	152	13,456	16	1,453	5	443	0	0	2	121	9	889	0	0	12	1,089	4	364	5	484

*Number of employers reporting employees in each cell.

HOME ECONOMICS OCCUPATIONS

For those interested in Home Economics Occupations there are instructional training areas that relate to personal, home, and family life knowledges and skills. The instructional training areas also include concepts drawn from the natural and social sciences and the humanities.

Home Economics Occupations projected 17,902 persons as being presently employed (Table 5). The instructional training area of institutional and home management and supporting services projected the largest number of persons presently employed, 10,385. The next largest projected employment is in the instructional training areas of food management, production and services, 4,688 and clothing management, production and services, 2,223.

Replacement needs for the next twelve months due largely to expansion will come from new employees. Opportunities in the instructional training area of institutional and home management and supporting services is projected at 2,101 for the next twelve months.

Food management, production and services instructional training area projected the greatest number of opportunities during the following two years.

TABLE 5

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN HOME ECONOMICS OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Professional 1	4	202	2	81	2	81	0	0	0	0	0	0	0	0	0	0	2	81	0	0
Managerial 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Care and Guidance of Children 3	2	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothing Management, Production and Services 4	9	2,223	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	1	40
Food Management, Production and Services 5	27	4,688	9	808	1	162	1	40	1	81	6	525	0	0	3	364	6	444	4	485
Home Furnishings, Equipment and Services 6	4	323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Institutional and Home Management and Supporting Services 7	43	10,385	3	2,101	1	2,020	0	0	0	0	2	81	0	0	1	40	2	2,061	1	81
Totals	89	17,902	15	3,030	5	2,303	1	40	1	81	8	606	0	0	4	404	11	2,626	6	606

*Number of employers reporting employees in each cell.

OFFICE OCCUPATIONS

Office Occupations instructional training areas provide opportunities for those interested in preparing for or advancing in selected office occupations. Instructional processes and learning experiences are designed to lead to employment and/or advancement in public or private enterprises or organizations related to the facilitation function of an office. Office Occupations can be the connecting link between production and distribution activities such as recording and retrieval of data; supervision and coordination of office activities; internal and external communication; and the reporting of information.

The total projected present employment if Office Occupations is 70,515 (Table 6). The largest projection is in the instructional training area of filing, office machines and general office clerical, 24,650. The next largest projections are in the areas of accounting and computing, 13,457; stenographic, secretarial and related, 8,001; and supervisory and administrative management, 7,395.

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The greatest projected opportunities for the next twelve months are in the instructional training areas of filing, office machines, and general office clerical, 2,101; accounting and computing, 1,657; and materials support (transporting storing and recording), 1,333. Reasons for these needs are due largely to turnover and expansion with replacement coming from new applicants.

Opportunities for the following two years are projected largely in the instructional training areas of filing, office machines, and general office clerical, and accounting and computing.

TABLE 6
PROJECTED EMPLOYMENT AND OPPORTUNITIES IN OFFICE OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Professional 1	8	687	3	120	1	40	0	0	1	40	1	40	0	0	1	40	2	80	2	162
Accounting and Computing 2	153	13,457	27	1,657	8	445	0	0	1	40	18	1,172	2	81	9	889	16	687	21	2,101
Business Data Processing Systems ..3	14	2,748	5	283	2	121	0	0	0	0	3	162	0	0	3	162	2	121	7	364
Filing, Office Machines, and General Office Clerical 4	216	24,650	39	2,101	11	687	4	202	1	40	23	1,172	2	80	8	647	29	1,374	30	3,516
Information Communication 5	96	6,061	11	485	2	81	2	81	1	40	6	283	1	40	1	40	9	405	8	404
Materials Support (Trans, Stor. & Rec.) 6	30	5,334	10	1,333	4	727	0	0	0	0	6	606	0	0	0	0	10	1,333	6	889
Personnel, Training & Related 7	8	323	2	80	1	40	0	0	0	0	1	40	1	40	1	40	0	0	1	40
Stenographic, Secretarial & Related 8	72	8,001	10	728	3	364	2	81	0	0	5	283	0	0	3	162	7	566	16	929
Supervisory & Administrative Management 9	91	7,395	4	202	2	81	0	0	0	0	2	121	0	0	1	40	3	162	3	121
Typing and Related 10	11	1,859	5	282	0	0	0	0	1	40	4	242	0	0	2	162	3	120	6	445
Totals	699	70,515	116	7,271	34	2,586	8	364	5	200	69	4,121	6	241	29	2,182	81	4,848	100	8,971

*Number of employers reporting employees in each cell.

TRADE AND INDUSTRIAL OCCUPATIONS

Trade and Industrial Occupations instructional training areas prepare those interested in initial employment, for upgrading or retaining workers in a wide range of trade and industrial occupations. Such occupations are skilled or semi-skilled and are concerned with layout designing, producing, processing, assembling, testing, maintaining, servicing, or repairing any product or commodity. Some specialized fields of technology instructional training areas are included with Trade and Industrial Occupations.

The total projected present employment for trade and Industrial Occupations is 152,466 (Table 7). The largest projected present employment is in the instructional training areas of heavy equipment (construction and maintenance), 23,276; custodial services, 19,316; carpentry (construction and maintenance), 13,659; waiter/waitress (quantity food), 11,961; and foremanship and supervision, 11,436.

Opportunities for need during the next twelve months are projected as 26,546. The instructional training areas with the greatest need projected are carpentry (construction and maintenance), 4,203; heavy equipment (construction and maintenance), 4,082; waiter/waitress (quantity food), 2,990; and custodial services, 2,505. The instructional training areas of carpentry and heavy equipment (construction and maintenance), cook/chef and waiter/waitress (quantity food) listed turnover as their greatest reason for replacement need; while custodial services, foremanship and supervision, and graphic arts listed expansion as reason for replacement need. Most of the replacements will come from new employees.

During the following two years 28,405 opportunities are projected. The greatest need is in the instructional training areas of waiter/waitress (quantity food), 6,425; carpentry (construction and maintenance), 5,496; heavy equipment (construction and maintenance), 3,394; cook/chef (quantity food), 1,818; and painting and decorating (construction and maintenance), 1,778.

TABLE 7

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN TRADE AND INDUSTRIAL OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N°	Projected	N°	Projected	N°	Expansion	N°	Retirement	N°	Promotion	N°	Turnover	N°	In Firm	N°	Outside Firm	N°	New	N°	Projected
Professional 1	10	1,374	1	121	1	121	0	0	0	0	0	0	0	0	0	0	1	121	3	121
Managerial 2	54	3,475	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	1	40
Air Conditioning 3	14	1,334	3	202	2	121	0	0	0	0	1	81	0	0	0	0	3	202	2	202
Appliance Repair 4	6	323	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	2	81
Architectural Engineering Technology 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Automotive Services:																				
Body and Fender 6	10	1,293	2	121	2	121	0	0	0	0	0	0	0	0	0	0	2	121	0	0
Mechanics 7	40	4,001	12	768	7	323	0	0	0	0	5	445	0	0	9	606	3	162	11	808
Specialization 8	28	3,556	9	606	5	242	0	0	0	0	4	364	0	0	4	242	5	364	7	808
Aviation:																				
Aircraft Maintenance 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aircraft Operations 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ground Operations 11	1	40	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	1	40
Blueprint Reading 12	2	606	1	81	1	81	0	0	0	0	0	0	0	0	1	81	0	0	1	81
Business Machine Maintenance ...13	5	525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical Technology 14	2	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Civil Engineering Technology 15	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	40
Commercial Art 16	4	485	1	40	1	40	0	0	0	0	0	0	0	0	1	40	0	0	0	0
Commercial Fishery 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial Photography 18	6	485	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction and Maintenance:																				
Carpentry 19	39	13,659	23	4,203	5	364	2	162	2	121	14	3,556	1	81	6	1,576	16	2,546	14	5,496
Electricity 20	2	283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Equipment 21	60	23,276	24	4,082	7	606	4	283	1	81	12	3,112	3	202	9	768	12	3,112	14	3,394
Masonry 22	19	2,505	4	242	1	40	1	40	0	0	2	162	0	0	2	121	2	121	4	323
Painting and Decorating 23	11	1,212	3	929	1	40	0	0	0	0	2	889	0	0	0	0	3	929	2	1,778
Plastering 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRADE AND INDUSTRIAL OCCUPATIONS (cont.)

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Pro-jected	N*	Pro-jected	N*	Expan-sion	N*	Retire-ment	N*	Pro-motion	N*	Turn-over	N*	In Firm	N*	Out-side Firm	N*	New	N*	Pro-jected
Plumbing and Pipe Fitting 25	22	2,142	5	363	1	40	0	0	1	40	3	283	1	40	2	81	2	242	4	323
Dry-Wall Installation 26	1	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glazing & Glass 27	2	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roofing 28	2	647	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Custodial Services 29	97	19,316	13	2,505	6	2,223	1	40	0	0	6	242	1	40	1	40	11	2,425	16	970
Diesel Mechanic 30	4	929	1	81	0	0	0	0	0	0	1	81	0	0	1	81	0	0	0	0
Drafting 31	6	1,010	1	40	0	0	0	0	0	0	1	40	0	0	0	0	1	40	0	0
Electrical:																				
Industrial Electrician 32	18	1,657	2	81	2	81	0	0	0	0	0	0	0	0	0	0	2	81	3	162
Lineman 33	4	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor Repairman 34	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electronics:																				
Communications 35	15	5,859	7	524	2	121	1	40	1	40	3	323	1	40	1	80	5	404	4	606
Industrial 36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio/Television 37	8	566	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	1	40
Electro-Mechanical Technology ..38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fabric Maintenane Services:																				
Drycleaning 39	13	889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laundering 40	6	1,738	2	162	0	0	0	0	0	0	2	162	0	0	0	0	2	162	2	323
Foremanship, Supervision 41	26	11,436	6	1,373	3	929	0	0	1	40	2	404	3	606	0	0	3	767	1	606
Graphic Arts 42	50	7,637	12	1,010	8	849	1	40	0	0	3	121	0	0	6	687	6	323	12	606
Industrial Atomic Energy 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Engineering Techology .44	3	121	1	40	1	40	0	0	0	0	0	0	0	0	0	0	1	40	0	0
Instrument Maintenance and Repair 45	5	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mechanical Engineering Technology 46	1	1,293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maritime 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metalworking:																				
Foundry 48	1	242	1	162	1	162	0	0	0	0	0	0	0	0	0	0	1	162	0	0
Machine Shop 49	6	1,657	2	162	1	81	0	0	0	0	1	81	0	0	1	81	1	81	2	202
Machine Tool Operations 50	2	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	40
Metal Trades Combined 51	2	606	1	606	1	606	0	0	0	0	0	0	0	0	0	0	1	606	1	404
Sheet Metal 52	2	364	2	81	0	0	0	0	0	0	2	81	0	0	1	40	1	41	0	0
Welding and Cutting 53	14	3,152	8	1,011	6	849	0	0	0	0	2	162	0	0	3	283	5	728	1	162
Tool and Die Making-Sinking ...54	2	445	2	162	1	81	0	0	0	0	1	81	0	0	1	81	1	81	1	81
Pattern Making 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metallurgy 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal Services:																				
Barbering 57	10	525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	40
Cosmetology 58	21	1,738	4	202	3	162	1	40	0	0	0	0	1	40	1	40	2	122	7	364
Plastics 59	3	808	4	809	1	162	0	0	0	0	3	647	0	0	1	121	3	688	2	889

TRADE AND INDUSTRIAL OCCUPATIONS (cont.)

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months																The Following 2 Years	
			Total Needed		Reason for Need								Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Public Service:																				
Fireman 60	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Law Enforcement 61	23	2,344	8	526	0	0	2	81	0	0	6	445	0	0	3	162	5	364	4	606
Quantity Food:																				
Baker 62	7	364	1	40	0	0	0	0	1	40	0	0	0	0	1	40	0	0	0	0
Cook/Chef 63	47	5,981	15	1,253	5	202	0	0	0	0	10	1,051	0	0	5	485	10	768	14	1,818
Meat Cutter 64	20	1,455	2	80	1	40	1	40	0	0	0	0	0	0	1	40	1	40	2	81
Waiter/Waitress 65	84	11,961	29	2,990	7	606	0	0	1	40	21	2,344	0	0	7	566	22	2,424	32	6,425
Refrigeration 66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Engine Repair:																				
Internal Combustion 67	5	283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stationary Energy Sources 68	2	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textile Production and Fabrication69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leatherworking 70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Upholstering 71	5	3,031	1	202	1	202	0	0	0	0	0	0	0	0	1	202	0	0	0	0
Woodworking 72	10	2,546	5	526	2	162	0	0	2	162	1	202	2	162	0	0	3	364	2	445
Totals	865	152,466	222	26,546	90	9,857	14	766	10	564	108	15,359	13	1,211	69	6,544	140	18,791	176	28,405

TABLE 8

PROJECTED EMPLOYMENT AND OPPORTUNITIES IN OTHER OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed		Next 12 Months														The Following 2 Years	
			Total Needed		Reason for Need						Where Replacements Will Be Obtained						Total Needed	
	N*	Projected	N*	Projected	N*	Expansion	N*	Retirement	N*	Promotion	N*	Turnover	N*	In Firm	N*	Outside Firm	N*	New	N*	Projected
Professional 1	169	31,520	48	3,838	9	1,010	6	242	1	40	32	2,546	5	202	22	2,263	21	1,373	41	4,930
Managerial 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laborers, Unskilled 3	48	9,577	20	3,273	3	283	0	0	0	0	17	2,990	0	0	3	242	17	3,031	24	4,364
Municipal Employees 4	18	1,010	3	121	0	0	0	0	0	0	3	121	0	0	2	81	1	40	0	0
Totals	235	42,107	71	7,232	12	1,293	6	242	1	40	52	5,657	5	202	27	2,586	39	4,444	65	9,294

*Number of employers reporting employees in each cell.

OTHER OCCUPATIONS

This section is necessary to show employment which cannot be classified into an instructional training area. The total projected employment in Other Occupations (Table 8) is 42,107. The professional group accounts for 31,520 persons; laborers, unskilled, accounts for 9,577; and municipal employees accounts for the remaining 1,010 persons.

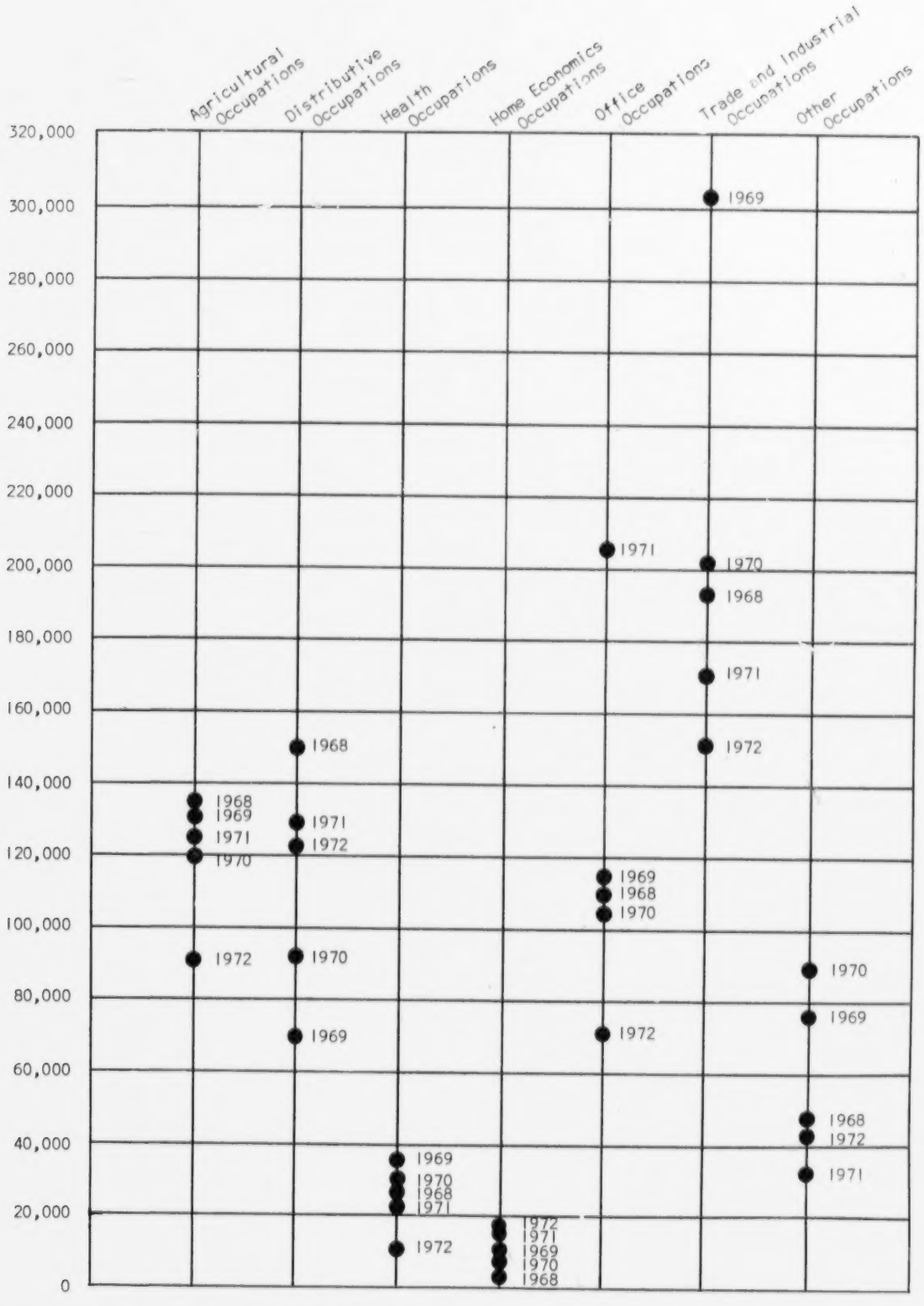

Figure I -- Projected number of persons employed in Nebraska from 1968-1972, by Major Vocational Technical Area.

FIVE YEAR COMPOSITE SUMMARY

An important benefit gained from the model design resulted from combining and averaging the data for the years during which the studies have been conducted. The sampling percentage of the state-wide population of firms is admittedly smaller than is desirable. The fact remains that a three percent sampling is as large as can be managed for a given year with existing limitations of finance and personnel. Offsetting this recognized delimitation is the advantage gained by combining summaries of each year the study was conducted; this, in reality, provides the benefits of larger sampling over a longer period of time.

The 1972 study is the third year of the composite summary section which is presented as a more stable employment projection. The averaging of the individual yearly projections compensates for under- or over-sampling due to limitations of the study.

Only the totals have been reported for the three major areas of "Now Employed," "Needed Next 12 Months," and "Needed Following 2 Years." The reasons the need existed and where the replacements would be obtained were dropped from the Composite Summary. The same practice was followed for the "N" column, an indication of the number of firms reporting data for an instructional training area.

Tables 9 through 16 present the composite data by major vocational technical area.

It should be recognized, when comparing data relative to employees needed for the next twelve months, that the data averaged together are for different calendar years. Consequently, the data do not actually project for the same twelve month period but are an average projection, gained from the years in which the survey was conducted. The same interpretation would need to be provided concerning the number of employees estimated to be needed during the following two years.

The data in Table 9 are the totals taken from Tables 10 through 16 inclusively. The data were derived by averaging totals from each instructional training area for the 1968, 1969, 1970, 1971 and 1972 studies.

TABLE 9
COMPOSITE DATA TOTALLED BY MAJOR VOCATIONAL TECHNICAL AREA

	Now Employed		Future Needs			
			Next 12 Months		Following 2 Years	
	Number	Percentage of Total	Number	Percentage of Total	Number	Percentage of Total
Agricultural Occupations	120,341[a]	18.5	15,904[b]	13.9	17,421[b]	10.6
Distributive Occupations	124,142	19.0	25,196	22.0	41,411	25.2
Health Occupations	24,317	3.7	4,136	3.6	6,754	4.1
Home Economics Occupations	12,305	1.9	2,127	1.9	2,510	1.5
Office Occupations	124,367	19.1	17,787	15.6	29,053	17.6
Trade and Industrial Occupations	188,626	29.0	40,402	35.3	56,295	34.2
Other Occupations	57,036	8.8	8,851	7.7	11,158	6.8
Totals	651,134	100.0	114,403	100.0	164,602	100.0

[a]Nebraska Department of Agriculture, *Nebraska Agricultural Statistics Annual Report, loc. cit.*
[b]Genereaux, Douglas, *loc. cit.*

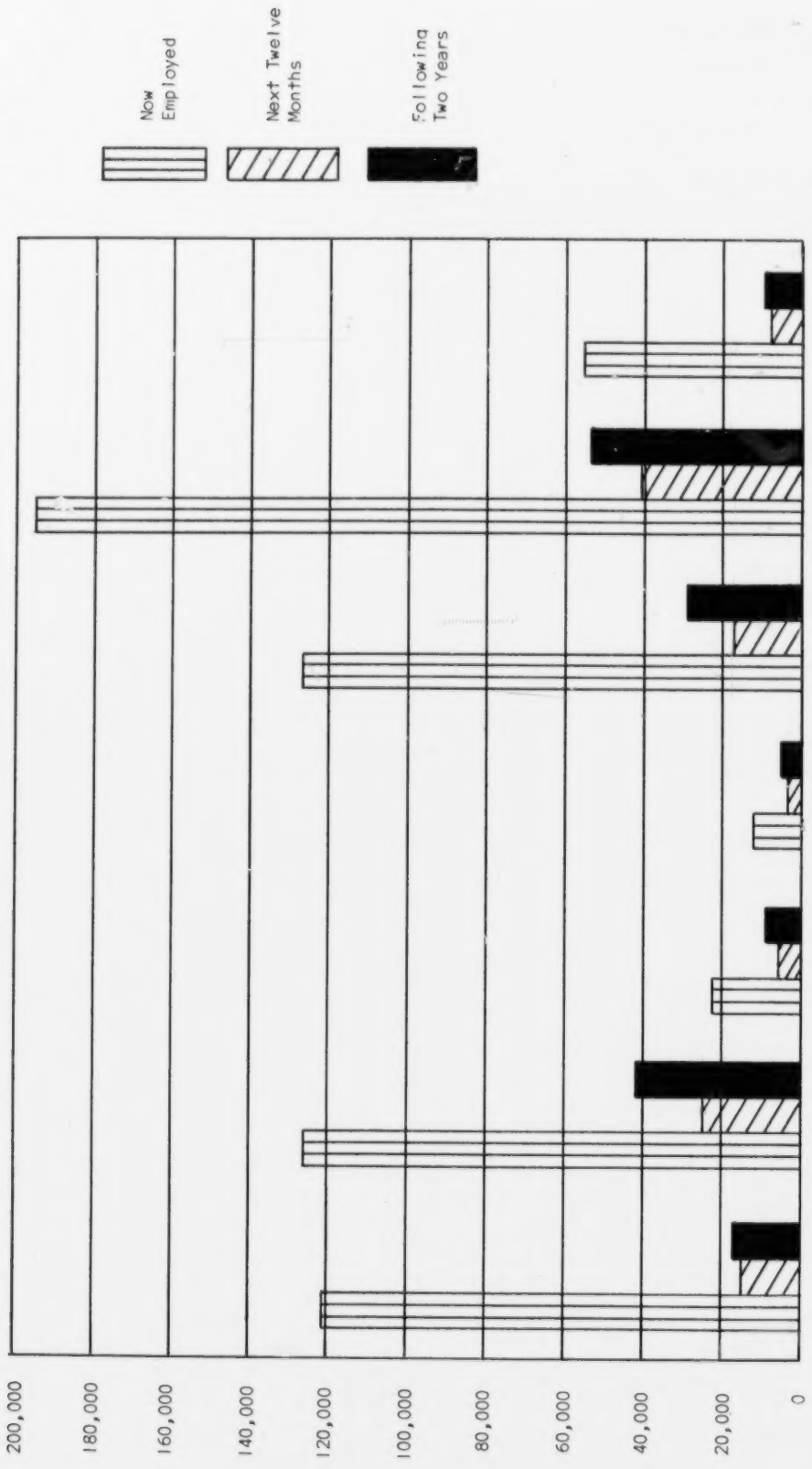

Figure 2 -- 1972 Composite data presented in Table 9 showing: Now Employed; Employment Needs for the Next Twelve Months and the Following Two Years.

TABLE 10

COMPOSITE DATA FOR AGRICULTURAL OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional and Managerial 1	5,224	344	659
Agricultural Production 2	34,606	8,671	9,007
Self Employed Farmers 2a	57,852 [a]	951 [b]	1,902 [b]
Agricultural Supplies/Services 3	6,304	2,509	1,874
Agricultural Mechanics 4	2,962	1,026	999
Agricultural Products (Processing, Inspection & Marketing 5	10,913	1,417	2,213
Ornamental Horticulture (Production, Processing, Marketing, and Services) 6	1,252	676	605
Agricultural Resources (Conservation, Utilization and Services) 7	1,145	243	142
Forestry (Production, Processing, Management, Marketing, and Services) 8	83	67	20
Totals	120,341	15,904	17,421

[a]Nebraska Department of Agriculture, *Nebraska Agricultural Statistics Annual Report, loc. cit.*
[b]Genereaux, Douglas, *loc. cit.*

TABLE 11

COMPOSITE DATA FOR DISTRIBUTIVE OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional and Managerial 1	10,925	999	1,274
Advertising Services 2	1,656	147	212
Apparel and Accessories 3	7,069	1,334	2,544
Automotive 4	4,286	666	970
Finance and Credit 5	4,800	896	1,770
Floristry 6	394	73	81
Food Distribution 7	13,581	3,960	7,637
Food Services 8	1,660	230	380
General Merchandise 9	15,840	4,326	7,492
Hardware, Building Materials, Farm Garden Supplies & Equipment 10	5,092	898	1,287
Home Furnishings 11	2,514	391	2,154
Hotel and Lodging 12	1,458	157	370
Industrial Marketing 13	7,518	434	703
Insurance 14	6,844	435	733
International Trade 15	0	0	0
Personal Services 16	473	0	65
Petroleum 17	11,248	3,118	4,692
Real Estate 18	3,040	341	607
Recreation and Tourism 19	3,217	1,250	2,219
Transportation 20	22,527	5,541	6,221
Totals	124,142	25,196	41,411

TABLE 12

COMPOSITE DATA FOR HEALTH OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Dental:			
Professional & Managerial 1	2,169	385	450
Dental Assisting 2	913	143	241
Dental Hygiene (Associate Degree) 3	76	34	27
Dental Laboratory Technology 4	191	102	109
Medical:			
Professional & Managerial 5	5,331	507	931
Laboratory Technology 6	1,109	216	393
Nursing (Excluding RN's) 7	13,408	2,619	4,333
Rehabilitation 8	293	13	93
Radiologic 9	442	77	150
Ophthalmic 10	319	27	20
Environmental Health 11	66	13	7
Mental Health Technology 12	0	0	0
Totals	24,317	4,136	6,754

TABLE 13

COMPOSITE DATA FOR HOME ECONOMICS OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional & Managerial 1	730	71	123
Care and Guidance of Children 2	295	74	120
Clothing Management, Production and Services 3	1,531	163	189
Food Management, Production and Services 4	2,867	548	809
Home Furnishings, Equipment and Services 5	190	20	27
Institutional and Home Management and Supporting Services 6	6,692	1,251	1,242
Totals	12,305	2,127	2,510

1939

TABLE 14

COMPOSITE DATA FOR OFFICE OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional 1	834	96	298
Accounting and Computing 2	16,010	2,079	3,582
Business Data Processing Systems 3	6,164	747	1,244
Filing, Office Machines, and General Office Clerical 4	37,680	5,586	9,343
Information Communication 5	11,103	943	934
Materials Support (Transportation, Storing, and Recording) 6	6,017	1,715	2,644
Personnel, Training, and Related 7	2,279	417	449
Stenographic, Secretarial, and Related 8	17,740	2,439	4,065
Supervisory and Administrative Management 9	16,010	2,563	4,402
Typing and Related 10	10,530	1,202	2,092
Totals	124,367	17,787	29,053

TABLE 15

COMPOSITE DATA FOR TRADE AND INDUSTRIAL OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional and Managerial 1	12,549	766	1,019
Air Conditioning 2	2,289	280	417
Appliance Repair 3	1,301	317	452
Architectural Engineering Technology 4	739	145	162
Automotive Services:			
Body and Fender 5	1,409	300	218
Mechanics 6	6,445	1,215	1,477
Specialization 7	2,047	849	1,781
Aviation:			
Aircraft Maintenance 8	168	55	35
Aircraft Operations 9	156	90	55
Ground Operations 10	501	174	101
Blueprint Reading 11	121	16	16
Business Machine Maintenance 12	766	95	53
Chemical Technology 13	352	53	95
Civil Engineering Technology 14	466	133	208
Commercial Art 15	601	43	85
Commercial Fishery 16	8	0	0
Commercial Photography 17	587	111	176
Construction and Maintenance:			
Carpentry 18	13,142	4,895	8,167
Electricity 19	1,150	394	605
Heavy Equipment 20	13,433	2,381	2,976
Masonry 21	5,523	2,209	2,808
Painting and Decorating 22	2,376	951	1,500
Plastering 23	46	124	192
Plumbing and Pipe Fitting 24	2,888	473	512
Dry-Wall Installation 25	922	112	233
Glazing & Glass 26	380	47	47

1940

COMPOSITE DATA FOR TRADES AND INDUSTRIAL OCCUPATIONS (cont.)

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Roofing 27	1,027	363	379
Custodial Services 28	17,127	2,116	3,011
Diesel Mechanic 29	815	176	207
Drafting 30	1,085	199	328
Electrical:			
Industrial Electrician 31	1,096	134	216
Lineman 32	1,105	181	188
Motor Repairman 33	1,001	93	167
Electronics:			
Communications 34	5,067	538	698
Industrial 35	3,790	244	797
Radio/Television 36	1,175	238	441
Electro Mechanical Technology 37	1,551	221	293
Fabric Maintenance Services:			
Drycleaning 38	1,824	788	1,103
Laundering 39	2,059	615	1,538
Foremanship, Supervision 40	3,177	330	134
Graphic Arts 411	4,124	610	448
Industrial Atomic Energy 42	0	0	0
Industrial Engineering Technology 43	220	15	20
Instrument Maintenance and Repair 44	2,410	144	104
Mechanical Engineering Technology 45	532	27	73
Maritime 46	0	0	0
Metalworking:			
Foundry 47	1,585	1,109	1,984
Machine Shop 48	9,835	1,579	2,395
Machine Tool Operation 49	5,086	260	775
Metal Trades Combined 50	1,154	223	354
Sheet Metal 51	1,739	657	335
Welding and Cutting 52	4,393	775	785
Tool and Die Making-Sinking 53	322	48	16
Pattern Making 54	10	0	0
Metallurgy 55	0	0	0
Personal Services:			
Barbering 56	742	76	48
Cosmetology 57	2,301	304	310
Plastics 58	162	162	179
Public Service:			
Fireman 59	209	20	33
Law Enforcement 60	2,594	293	508
Quantity Food:			
Baker 61	472	61	87
Cook/Chef 62	12,995	3,646	6,318
Meat Cutter 63	2,074	235	308
Waiter/Waitress 64	18,886	6,812	7,318
Refrigeration 65	395	40	53
Small Engine Repair, Internal Combustion 66	483	129	76
Stationary Energy Sources 67	630	33	46
Textile Production and Fabrication 68	895	170	95
Leatherworking 69	67	0	7
Upholstering 70	1,025	178	108
Woodworking 71	1,022	332	622
Totals	188,626	40,402	56,295

TABLE 16

COMPOSITE DATA FOR OTHER OCCUPATIONS

INSTRUCTIONAL TRAINING AREA	Now Employed	Future Needs	
		Next 12 Months	Following 2 Years
Professional and Managerial 1	33,888	6,734	5,263
Laborers, Unskilled 2	22,332	2,045	5,831
Municipal Employees 3	816	72	64
Totals	57,036	8,851	11,158

VT 017 593
PROGRAM ANALYSIS INSTRUMENT FOR BUSINESS EDUCATION.

NEW YORK STATE EDUCATION DEPT., ALBANY. BUREAU OF BUSINESS AND DISTRIBUTIVE EDUCATION.
MF AVAILABLE IN VT-ERIC SET.
GREGORY BENSON, JR., NEW YORK STATE UNIVERSITY, STATE EDUCATION DEPARTMENT, ALBANY, NEW YORK 12224
PUB DATE - 72 18P.

DESCRIPTORS - *PROGRAM EVALUATION; *BUSINESS EDUCATION; *EVALUATION CRITERIA; *PROGRAM EFFECTIVENESS; *INSTRUMENTATION; EDUCATIONAL PHILOSOPHY; EDUCATIONAL OBJECTIVES; CURRICULUM DESIGN, CURRICULUM DEVELOPMENT; INSTRUCTIONAL STAFF; INSTRUCTIONAL MEDIA; TEACHING METHODS; EDUCATIONAL FACILITIES; EDUCATIONAL EQUIPMENT; GUIDANCE SERVICES

ABSTRACT - THIS PROGRAM EVALUATION GUIDE CONTAINS CRITERIA WHICH SHOULD PROVIDE A BASIS FOR DETERMINING THE EFFECTIVENESS OF A SCHOOL'S BUSINESS EDUCATION PROGRAM. THE INSTRUMENT CONTAINS CRITERIA FOR EVALUATING: (1) THE PHILOSOPHY AND GOALS OF THE PROGRAM, (2) PROGRAM OBJECTIVES, CURRICULUM ORGANIZATION AND DEVELOPMENT, AND PROGRAM EVALUATION, (3) ADMINISTRATION, DEPARTMENT CHAIRMAN, AND INSTRUCTORS, (4) COOPERATIVE WORK EXPERIENCE, STANDARDS AND TESTING, AND INSTRUCTIONAL ACTIVITIES, METHODS, AND MEDIA, (5) EQUIPMENT AND FACILITIES, (6) GUIDANCE SERVICES, (7) COCURRICULAR PROGRAM, AND (8) PROGRAM PROMOTION. INSTRUCTIONS FOR USING THE INSTRUMENT AND A BIBLIOGRAPHY ARE INCLUDED. (SB)

VT 017 593

PROGRAM ANALYSIS INSTRUMENT FOR BUSINESS AND OFFICE EDUCATION

VT 017593

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Business Education
Albany, New York 12210

1944

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PROGRAM ANALYSIS INSTRUMENT FOR BUSINESS EDUCATION

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Business Education
Albany, New York 12210
1972

1945

BUSINESS EDUCATION PROGRAM ANALYSIS

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THE ANALYSIS PROCESS

School administrators want programs in their schools that are marked by excellence -- that are designed to foster the highest possible levels of student performance and which succeed in achieving their stated purposes and goals.

To gauge the effectiveness of a school's business education program, the business education staff should have criteria indicating optimal practices and conditions. The criteria enumerated in this program evaluation guide, therefore, seek to provide the bases upon which a program may be judged. The criteria are by no means exhaustive; they are an attempt to bring together standards in various aspects of the program believed to have a high priority.

Use of the Instrument

Maximum staff involvement is encouraged in the use of this program analysis instrument. Each item in the instrument should be classified according to its importance and relevance in the business department under review.

It is not intended that each criterion be applied to every business department. The total instrument is designed for programs of various sizes and having different goals. In evaluating your department, if a particular criterion appears unimportant or not applicable, that condition or practice should be so classified and not rated.

Wherever indicated, appropriate criteria that the business education staff believes should be considered in the program review should be added. This will provide the staff the opportunity to consider the strongest and weakest links in the total business education program.

Each item classified as important or significant should be rated individually or collectively by the business education staff. Part C, section 2, provides the opportunity for the department chairman to evaluate his own performance as well as for his evaluation by members of the staff. In part C, section 3, each teacher should rate only himself. This rating should not involve judging other members of the department staff.

In part D, each item should be given a general rating applicable to the department as a whole.

Suggestions for Remedial Steps

As this program self-evaluation is being completed, ideas or plans for improving a practice or condition should be entered in the last column of the instrument. Obviously, action cannot be taken immediately

on all items where remedial steps are indicated. The staff should probably establish a priority for the various remedial actions and establish alternative plans where immediate steps cannot be taken. Individuals or committees should then be designated to coordinate and report the progress of courses of action suggested by the program analysis.

Expected Outcomes

Undoubtedly, one of the major values to be derived from any program self-evaluation is the interchange and frank discussion generated by the various evaluative criteria. Thus the process of program self-evaluation may have as many lasting benefits as the program strengths and weaknesses identified by the staff.

A profile of the ratings is not suggested by this analysis instrument because its primary purpose is to identify needed improvements rather than portray the status quo. This should not deter the staff from preparing a profile, however, particularly if administrators or other groups are interested in a "status report" of the program as it is currently constituted.

Reactions on the use of this instrument and its contribution to program development will be welcomed by the Bureau.

Directions: The following rating procedures are suggested to record staff reactions to each of the criteria listed in the program self-analysis instrument:

Left Column	Important	Not Important
Right Column	Rating	Analysis

1. Check the column that applies to your business department.

1. Rate the item
   4 = Excellent Condition or Practice
   3 = Some Improvement Necessary
   2 = Considerable Improvement Necessary
   1 = Complete Improvement or Development Necessary

2. Use analysis column to record the status of the condition or practice, and/or to propose action.

1948

PART A
PHILOSOPHY AND GOALS

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		1. In order to assess its value and its contribution to the education of pupils, the business education staff has considered the following in formulating a philosophy of business education.		
___	___	a. The philosophy of the total school system.	___	___
___	___	b. The attitude of parents and the business community toward business education and its role in the total secondary school educational environment.	___	___
___	___	c. The role of business education in furthering the ideals of our American system of free enterprise.	___	___
___	___	d. The possible contribution of business and office education for preparing for a better life for all high school youth regardless of economic or social status, occupational or professional goals, talents or abilities.	___	___
___	___	e. The attitude of the business teachers toward providing business education to students of all ability levels.	___	___
		2. In preparing the goals (general aims and objectives) for business education, consideration has been given to:		
___	___	a. the type(s) of students in attendance in school and in business courses with respect to age and ability levels.	___	___
___	___	b. the needs of students for preparation for the duties of adult citizenship in the community, State, and Nation.	___	___
___	___	c. the needs of students for preparation for post-secondary educational pursuits.	___	___
___	___	d. the needs of students for career education.	___	___
		e. evidence from surveys of the business community with respect to:		
___	___	- career opportunities	___	___
___	___	- standards necessary for initial employment and advancement on the job	___	___
___	___	- competencies needed by business employees	___	___

PART B
PROGRAMING
1. Program Objectives

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		Career Orientation		
___	___	1. The program is designed to orient pupils to business and office careers.	___	___
		Fundamental Skills		
___	___	2. The program is designed to build effective communication skills required in business and office occupations.	___	___
___	___	3. The program is designed to develop skills in applied business mathematics.	___	___
		Socio-Business and Personal Use		
___	___	4. The program is designed to provide an understanding for the management of personal business activities as well as common business skills for personal use.	___	___
___	___	5. The program is designed to cultivate social skills and an appreciation of the importance of effective human relations.	___	___
		Occupational		
___	___	6. Vocational business education content is based on a careful analysis of the skills, knowledge, and attitudes required for successful employment and advancement in clusters of related office occupations.	___	___

PART B
PROGRAMING
2. Curriculum Organization and Development

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		1. The business education program provides planned curriculum sequences which will culminate in marketable skills for business education majors.		
		2. Mini-courses are provided to facilitate flexibility and breadth of content, particularly for students who ordinarily cannot fit the regular courses into their schedule.		
		3. Independent study in business education is provided for students who cannot schedule regular courses in the business education curriculum.		
		4. Accelerated business courses, such as Introduction to College Accounting, have been organized and offered for high-achieving students who plan on a career in business.		
		5. A 1-year senior intensive business program is offered for those senior students who decide at this time in their high school careers to prepare for office employment.		
		6. Students are permitted to advance through their business studies on the basis of individual achievement, not handicapped by a rigid timetable.		
		7. The program permits the limited ability student to feel a degree of achievement and success in addition to preparing the student to meet the requirements and expectations of the outside world.		
		8. The need for curriculum change is determined by exploring possible innovations. The potential effectiveness of the innovation is substantiated by on-site visits whenever possible.		
		9. Experimentation is conducted to determine the effectiveness of possible new curriculum designs and instructional practices.		
		10. Local courses of study are developed and revised to keep curriculum content current and appropriate. State syllabuses are used as a guide.		
		11. The business education program at the secondary level is compatible with the business program at the:		

PART B
PROGRAMING
2. Curriculum Organization and Development

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
___	___	• junior high school level	___	___
___	___	• area occupational center	___	___
___	___	• post-high school educational institutions in the area	___	___
___	___	12. Program development recognizes that separation of vocational and general business education causes distraction, but the two programs are enhanced when brought together.	___	___
___	___	13. The business education program places increased responsibility upon the student for directing his education and for making decisions.	___	___
___	___	14. Curriculum is developed with the understanding that education can no longer be planned within the confines of the school, but must coordinate with community resources and agencies.	___	___
___	___	15. The curriculum design fosters the use of such instructional strategies as team teaching, small and large group instruction, individualized instruction, and simulation.	___	___
___	___	16. Business education programs for disadvantaged and handicapped students are instituted when their educational needs cannot be met by the existing curriculum and enrollments are large enough for the program to be supported. (Disadvantaged means educationally disadvantaged; handicapped means physically and mentally handicapped pupils.)	___	___
___	___	17. Business and office education offerings are promoted for out-of-school youth and adults. • Vocational	___	___
___	___	• Nonvocational	___	___
___	___	18. The program for out-of-school youth and adults provides sequential offerings designed to develop competencies for office employment.	___	___

PART B
PROGRAMING
3. Program Evaluation

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
___	___	1. All business department personnel are involved in a planned, continuous process of program evaluation.	___	
___	___	2. The special competencies of business representatives in the community are used in an advisory capacity in the evaluation of the business program.	___	
___	___	3. The purpose of the program evaluation is clearly understood and wholeheartedly supported by the administration.	___	
___	___	4. Students currently enrolled in business education are periodically surveyed to assess their satisfaction with the instructional program and obtain suggestions for improvements.	___	
___	___	5. Former business students are surveyed regularly to obtain their opinions relative to the value of the instruction and services provided by the business education department.	___	
___	___	6. A variety of evaluative measures are used to judge program accountability.	___	
		PART C STAFF 1. Administrators		
___	___	1. The school administration is cognizant of the importance of the business education program in relation to other programs within the school.	___	
___	___	2. Administrators support the position that time away from classes attending professional conferences and conventions, or visiting programs in other schools is time well invested for staff and program development.	___	
___	___	3. In departments of two or more business teachers, one of the teachers is designated as chairman or senior teacher.	___	
___	___	4. The senior business teacher or department chairman is provided released time for administrative and supervisory duties when the size of staff warrants.	___	
___	___	5. The department chairman has an opportunity to interview applicants for his department and to make comments concerning their potentialities.	___	

PART C
STAFF

2. Department Chairman

Classification		CRITERIA	RATING		ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA		By D.C.	By other staff	Analyze condition or practice & propose action
		1. Departmental meetings are held or specific subject teachers are convened regularly for consideration and discussion of priorities for improving the instructional program.			
		2. Each year the department chairman provides leadership to the staff in the development of a major project involving such aspects as curriculum revision, instructional methods, media evaluation, public relations, etc.			
		3. The department chairman stimulates staff growth by taking steps that will result in the staff's active participation in professional organizations, such as NYSBTA, NBEA, EBTA, AVA, and AMS.			
		4. The department chairman periodically issues reviews of research that he believes might be beneficial to his staff.			
		5. The chairman promotes the ingenuity, resourcefulness, and individual talents of each of his teachers.			
		3. Instructors	Of yourself		
		1. Once a year another teacher is observed for at least two periods in the same, or in a different, school system.			
		2. At least one professional business education conference or workshop is attended each year.			
		3. An active part is taken in local, State, regional, and national business education associations and in conferences sponsored by colleges and universities.			
		4. Professional growth is extended through graduate study, inservice education, and reading of professional literature.			
		5. A variety of self-evaluation techniques is employed to appraise instructional effectiveness.			

PART D

INSTRUCTION

1. Activities, Methods, and Media

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		1. Business teachers experiment with new ideas and methods and carry out informal classroom research to improve their instruction.		
		2. Business teachers keep abreast of the findings of research and utilize that information to improve their own teaching.		
		3. Learnings are imparted through a variety of classroom learning activities and experiences.		
		4. Effective student-involvement techniques are used so that pupils are not passive in the learning process.		
		5. Alternative instructional strategies provide for the diverse educational needs and abilities of pupils.		
		6. Teachers develop and use supplementary reference and enrichment materials and other realia to provide instructional resources more appropriate, realistic, and up-to-date than conventional textbook material.		
		7. Appropriate resource media and materials have been acquired and developed for self-paced learning experiences.		
		8. Audiovisual media are employed to engender greater student interest during the learning process and to present concepts and understandings more efficiently.		
		2. Standards and Testing		
		1. Standards are clearly delineated in course syllabuses and are thoroughly understood by the entire staff.		
		2. Students are informed as to the purposes of evaluation and the expected standards in the individual business courses.		
		3. A variety of evaluative techniques (e.g., content tests, attitude checks, performance tests, and problem-solving assignments) are utilized.		
		4. Informal evaluating techniques are used, such as observation, interview, role playing, class discussion, group interaction, and business-type supervision.		

PART D
INSTRUCTION
3. Cooperative Work Experience

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		1. Office education majors have the opportunity to participate in a cooperative work experience program supervised by a qualified teacher-coordinator.		
		2. Work stations are selected on the basis of their ability to provide well-rounded experiences and learning situations.		
		3. Pre-orientation sessions are scheduled for both student-employees and training sponsors.		
		4. A training plan is developed for each cooperative work experience student that will assure minimal learning experiences.		
		5. The work experience of each student in the coordinated work experience program is correlated with classroom learnings.		
		6. The work experience coordinator visits the students regularly at their employment stations in order to evaluate the range and depth of experiences and the effectiveness of the business employer-supervisor.		
		7. The coordinator for the office experience program and the local business employer-supervisor share in the responsibility of evaluating the on-the-job performance of the student.		
		PART E EQUIPMENT AND FACILITIES		
		1. The business department members are involved in planning business education facilities in plant additions, renovations, and new buildings.		
		2. The shorthand and transcription classes have immediate access to the typewriters.		
		3. Business machines are comparable to those used in offices.		
		4. Provision is made for the repair and replacement of instructional equipment on a schedule commensurate with generally accepted practice.		
		5. The layout of facilities enables: • small group instruction • large group instruction • individualized instruction		

PART F
GUIDANCE

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
		1. Guidance and counseling practices are effective in acquainting youth with:		
___	___	• occupational careers in business	___	
___	___	• the general education values of business education	___	
___	___	2. The guidance staff understands all facets of the business education program and uses a proportionate amount of time in counseling students interested in business education.	___	
___	___	3. The head of the business education department, a business teacher, and/or a counselor talks to all junior high students about the business education sequences and resultant business and office career opportunities.	___	
___	___	4. Orientation to business and office careers is an integral part of the introductory or basic courses in the business education curriculum.	___	
___	___	5. Junior high school pupils are invited to tour the department and become familiar with the various learning opportunities available in business education.	___	
___	___	6. Students are given an opportunity to plan a business program sequence as part of the guidance activities incorporated in ninth and tenth grade business education courses.	___	
___	___	7. The staff of the business department works with the guidance counselors to help employment-bound business students obtain employment.	___	
___	___	8. A variety of tests and school records are used to assist students in planning their career goals.	___	
___	___	9. The business department chairman visits classes of tenth and eleventh grade pupils not in business education to highlight the value of each business elective.	___	
___	___	10. A departmental publication has been developed describing business curriculums, major sequences, electives, and other features of the business department such as cooperative work experience programs and business clubs.	___	

PART G
COCURRICULAR PROGRAM

Classification		CRITERIA	RATING	ANALYSIS (If rated 3, 2, or 1)
Imp	NI or NA			Analyze condition or practice & propose action
___	___	1. Opportunities are provided for student-planned, all-school assembly programs, school exhibits, bulletin board displays, demonstrations, contests, and similar activities.	___	___
___	___	2. When such work contributes to instruction, opportunities are provided for students to gain practical experience by rendering service of a clerical and secretarial nature to faculty members and school and nonprofit community groups.	___	___
___	___	3. A business club, such as Future Business Leaders of America, is sponsored to foster the development of leadership talents, business acumen, and social skills.	___	___
___	___	4. A departmental awards or honor program is established to provide recognition for achievement by business education majors.	___	___
		PART H PROGRAM PROMOTION		
___	___	1. Representatives of individual business firms lend their strength to the business department by serving on advisory committees and as visiting lecturers, and by carefully planned plant and office tours.	___	___
___	___	2. The business department publicizes the activities of the department and the accomplishments of business students through such media as displays and exhibits, the school paper, and local news media (newspapers, radio, television).	___	___
___	___	3. Business or community organizations are encouraged to sponsor an annual award for superior student achievement in business education.	___	___
___	___	4. Copies of monthly departmental reports as well as reports of professional meetings attended by department personnel are submitted to administrative personnel.	___	___

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1960

VT 017 606
MINUTES OF THE NATIONAL VOCATIONAL AGRICULTURAL TEACHERS' ASSOCIATION. ANNUAL CONVENTION (23RD, PORTLAND, OREGON, DECEMBER 4-8, 1971).

NATIONAL VOCATIONAL AGRICULTURAL TEACHERS' ASSOCIATION, LINCOLN, NEBR.
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ABSTRACT - PRESENTED IN THIS DOCUMENT ARE THE RECORDED MINUTES OF THE NATIONAL AGRICULTURAL TEACHERS ANNUAL CONVENTION IN SESSION FROM DECEMBER 4-8, 1971, IN PORTLAND, OREGON. INCLUDED IN ITS CONTENTS ARE PROCEEDINGS OF EXECUTIVE COMMITTEE MEETINGS, GENERAL SESSIONS, AND REGIONAL MEETINGS, AS WELL AS AN APPENDIX CONTAINING REPORTS OF SPECIAL COMMITTEES AND PERSONNEL, AWARDS GIVEN, AND CONTESTS HELD. NEWLY INITIATED POLICIES AND THE 1971-72 SLATE OF OFFICERS ARE LISTED. (SN)

VT 017 606

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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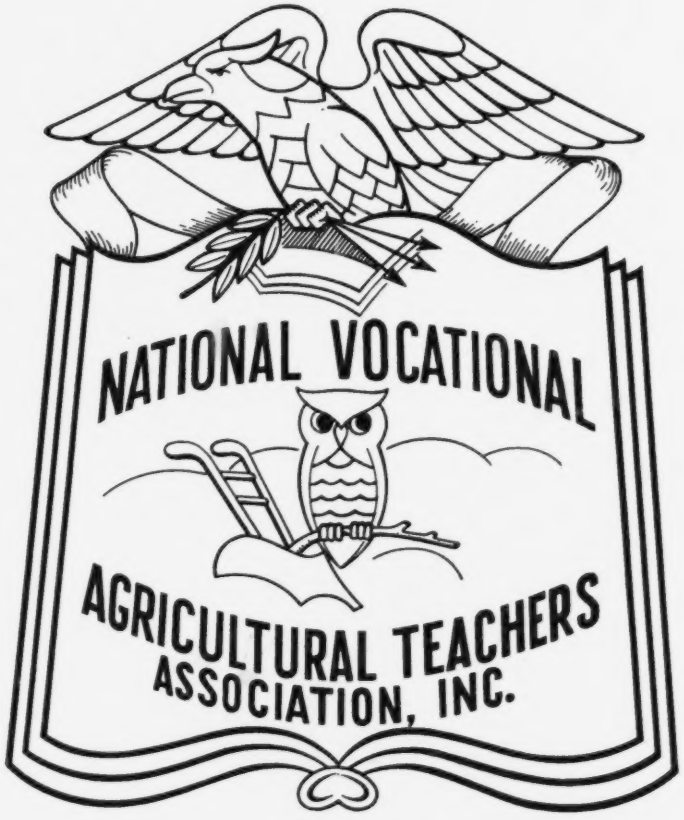

OF THE

N.V.A.T.A.

TWENTY-THIRD ANNUAL CONVENTION

PORTLAND, OREGON **DECEMBER 4 - 8, 1971**

VT017696

1962

SPECIAL APPRECIATION TO JIM AND GEORGIA WALL

WHEREAS, with the extreme dedication Jim and Georgia have always shown, their work above and beyond the call of duty has contributed much to the success of this convention, and,

WHEREAS, their gracious manner and hospitality in greeting guests and delegates and giving them directions to make the convention more meaningful and enjoyable has done much to create a friendly atmosphere so apparent at this and all previous NVATA Conventions, and,

WHEREAS, Jim's health has not deterred him in his constant efforts to keep this NVATA convention functioning in the best possible manner.

THEREFORE BE IT RESOLVED, that; we, the delegates of the twenty-third Annual NVATA Convention assembled in the Portland Hilton Hotel, Portland, Oregon, this seventh day of December 1971, express our sincere thanks and deepest appreciation for their unselfish efforts.

BE IT FURTHER RESOLVED, that this resolution become the preface of the Minutes of the 23rd Annual NVATA Convention held in Portland, Oregon, December 4 thru 8, 1971.

NATIONAL VOCATIONAL AGRICULTURAL
TEACHERS' ASSOCIATION INCORPORATED
1970 - 1971
EXECUTIVE COMMITTEE

Back Row Left to Right

FRED BECKMAN	IDAHO	VICE PRESIDENT REGION I
WILLIAM HARRISON	OLKAHOMA	VICE PRESIDENT REGION II
FRANCIS MURPHY	SOUTH DAKOTA	VICE PRESIDENT REGION III
ODELL MILLER	OHIO	VICE PRESIDENT REGION IV
D. P. WHITTEN	ALABAMA	VICE PRESIDENT REGION V
HOWARD TEAL	NEW YORK	VICE PRESIDENT REGION VI

Front Row Left to Right

SAM STENZEL	KANSAS	TREASURER
MILLARD GUNDLACH	WISCONSIN	PAST PRESIDENT
GLEN MCDOWELL	KENTUCKY	PRESIDENT
JAMES WALL	NEBRASKA	EXECUTIVE SECRETARY

1964

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AND REGIONAL MEETINGS

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MINUTES OF THE NVATA, INCORPORATED

Executive Committee Meetings
Portland, Oregon

Wednesday, December 1, 1971
Studio Suite
Portland Hilton Hotel

CALL TO ORDER

The meeting was called to order at 9:00 A.M. by President Glen McDowell. All committee members were present except Sam Stenzel, Treasurer who had been delayed by bad weather enroute.

INVOCATION

The Invocation was given by D. P. Whitten, NVATA Vice President for Region V, Centre, Alabama.

COMMUNICATIONS AND ANNOUNCEMENTS

The following announcements were made by the Executive Secretary, James Wall.

.....James Dougan, State Supervisor of Agricultural Education, Ohio who is on temporary assignment with the USOE will visit with the Committee.

.....Richard Hansen, Geigy Agricultural Chemicals desires to meet with the committee on Thursday.

.....Dana Bennett, Farm Film Foundation, will be unable to attend the convention, but the Foundation will be represented by James Gibson, Board Member.

.....Jay Benham, National FFA Alumni Association asked to meet with the Committee.

.....Dean Griffin, AVA Staff and C. M. Lawrence, AVA Vice President for Agriculture may appear before the Committee.

.....Other Special Guests who will be attending the convention include--

....DAVE KRAMER, Assistant Communications Supervisor, The New Holland Division of Sperry Rand, Corporation, New Holland, Pennsylvania.

....ART MITCHELL, Supervisor of Youth and Young Adult Activities, The National Rural Electric Cooperative Association, Washington, D. C.

....WALTER JACOBY, Vice President Programs, American Institute of Cooperation, Washington, D. C.

....VERN SCHNEIDER, President, American Institute of Cooperation, Washington, D. C.

....CHARLES BOURG, Manager, Agricultural Supplies-Marketing, United States Steel, Pittsburgh, Pennsylvania.

....BOB LYON, Manager, Marketing Information, A. O. Smith Harvestore, Inc., Arlington Heights, Illinois.

....PHIL SCHMIDT, Rural Youth Specialist, Farm Division, National Safety Council, Chicago, Illinois.

....CLIFF SAYLOR, National FFA Vice President for the Pacific Region, Glendale, Arizona.

....GRANT ESPLIN, Past President, National Association County Agricultural Agents, from the state of Utah.

....DR. ROBERT WORTHINGTON, Associate Commissioner, Adult, Vocational and Technical Education, Washington, D. C.

....HAROLD JOHNSON, District Manager, Pfizer Company, Inc., Spokane, Washington.

....OSCAR HAGG, Secretary, Agricultural Cooperative Council of Oregon, Corvallis.

....WAYNE DAGGETT, President, Agricultural Cooperative Council of Oregon, Assistant Manager, North Pacific Grain Growers, Portland.
....HENRY SCHACHT, Vice President and Secretary, California Canners and Growers, San Francisco, California.
....DON McDOWELL, Executive Director, National FFA Foundation, Madison, Wisconsin.

REPORTS - ANNUAL REPORT BROCHURE

It was moved by Francis Murphy and seconded by Millard Gundlach that all reports as printed in the Annual Report Brochure be accepted. Motion carried. (NOTE: All reports appear in the Appendix to the minutes.)

MEETING SCHEDULE

It was moved by Fred Beckman and seconded by D. P. Whitten to accept the meeting schedule proposed by President McDowell. The motion carried. Schedule accepted as follows:

9:00	--	11:30 A. M.	Meet
11:30	--	12:30 P. M.	Lunch
12:30	--	3:00 P. M.	Meet
3:00	--	3:15 P. M.	Break
3:15	--	5:00 P. M.	Meet

MOTION - NVATA BUDGET

It was moved by Fred Beckman and seconded by Odell Miller that a Committee be appointed to prepare a budget to be presented to the delegates when the question of a proposed dues increase is considered at the final general session. Motion carried. (NOTE: Budget appears on page 24 of the appendix). Committee appointed - Millard Gundlach, Bill Harrison, Sam Stenzel and James Wall.

AGENDA

After a poll of members for additional agenda items - it was moved by Fred Beckman and Seconded by Odell Miller to accept the agenda. Motion carried.

AG TEACHERS DIRECTORY

It was moved by Howard Teal and seconded by Bill Harrison that a committee be appointed to develop facts, figures, etc. in regard to the proposed purchase of the Ag Teachers Directory from Mr. and Mrs. T. L. Faulkner of Alabama that could be used in seeking advice from the delegates attending the Regional Meetings. Motion carried. President McDowell appointed the following: Fred Beckman, Howard Teal, Odell Miller, Francis Murphy, D. P. Whitten and himself as an ex-officio member.

LEADERSHIP SEMINAR

It was moved by Millard Gundlach, seconded by Howard Teal and carried that a Leadership Training Program for National and State Association Officers be developed and implemented with a session at NVATA Headquarters for National Officers and sessions at The Leadership Conferences for State Association Officers.

PROGRAM OF WORK REPORT FORM - 1971-1972

Chairmen of the various sections of The Program of Work were requested to up-date the Program of Work Report Form and turn it in to the Executive Secretary before the close of the Convention.

NEWSLETTERS TO ALL MEMBERS

Committee members re-affirmed their desire expressed at the Summer Meeting of the Committee to send two (2) Newsletters to all members during the year - one following the National Convention and one following the Summer Meeting of The Executive Committee.

RECESS AND CALL TO ORDER

The meeting was recessed at 11:35 A. M. for lunch and was called to order again at 1:00 P. M.

REVISION OF BYLAWS

The proposed revision of the Bylaws was discussed and it was agreed that all requirements for presenting the proposal to the delegate body had been met. It was suggested that when a reprint was made that an editorial correction be made in Article VI, Section 2 - b-2 by striking out the first (affiliated).

SAM STENZEL ARRIVED

Sam Stenzel whose arrival had been delayed by inclement weather in the Denver area joined the Committee at 1:05 P. M.

REGIONAL CITATION CERTIFICATES

Millard Gundlach moved that Regional Citation Certificates be signed only by the Vice President. After a second by Fred Beckman, the motion carried.

The following were appointed by President McDowell to serve on a Committee to develop a set of guidelines for presenting Regional Citations: Fred Beckman, Odell Miller and Howard Teal.

RESUMES - HONORARY LIFE MEMBERS AND CITATIONS

It was agreed that consideration would be given to candidates proposed for Honorary Life Membership and Citations only when duplicate copies of the candidates resume (one page - double spaced) was presented for Committee consideration at the Summer meeting of the Executive Committee.

OFFICER NOTEBOOKS

Bill Harrison moved and it was seconded by Odell Miller that officer notebooks and carrying cases be passed on to their successor. Motion carried.

GEIGY AWARD

The Executive Secretary, James Wall, reviewed his discussion with Richard Hansen of Geigy Agricultural Chemicals relative to changes proposed by Mr. Hansen in the scorecard. The committee was reminded that Mr. Hansen, would meet with them the following day.

TREASURER'S REPORT

The Treasurer's report was given by Sam Stenzel who moved that it be adopted. Motion carried after a second by Fred Beckman.

RECESS AND CALL TO ORDER

The committee recessed at 3:00 P. M. and the meeting was called to order again at 3:10 P. M.

DEAN GRIFFIN - AVA STAFF

Dean Griffin of the AVA Staff was introduced and spoke briefly to the committee. Activities mention by Mr. Griffin in which AVA has been active included:

....Assistance with the Denver Seminar
....Increased insurance benefits - tort liability.
....Eight Ag articles in AVA Journal.

HE ALSO -
....Provided each Vice President with a packet of materials relating to the Ag Division which are available from AVA.
....Asked that NVATA continue to make suggestions to AVA.

REVIEW OF CONVENTION PROGRAM AND PLANS
The following items were reviewed by the Executive Secretary, James Wall:

....Agricultural Education Division Policy Committee Meeting
....AVA Department Meetings
....Ag Ed Editing and Managing Board Meeting and Dinner
....Agenda - Three General Sessions
....Special Programs
(1) Agricultural Education Division Special Program
(2) NVATA Special Program
....Regional Meeting Plans - Agenda, attendance forms and supplies
(a) First Regional Meetings
(b) Second regional Meetings
....NVATA Reception
....Harvestore Breakfast
....State President's Dinner - Panel
....Co-Op Breakfast
....NVATA Past Officers' Dinner and Meeting
....NVATA Awards Breakfast
....Publicity Committee - Pictures and I. D. Badges
....Resolutions Committee - Meeting Schedule and I. D. Badges
....Registration procedures
....Tickets
....Convention Buttons
.....Membership Report - 5 Year Plaques, 100% certificates and Life Certificates
....Professional State Association Awards
....Ideas Unlimited - Judges and Awards
....Ag Ed Standing Committees
....Certification of Voting Delegates - Delegate Cards
....Hospitality
....Vice President's Checklist
....Supplies for Regional Meetings
....State Conference Dates
....Favors and Door Prizes
....Attendance - Ag Division Meetings

ADJOURNMENT
The meeting was adjourned at 4:30 - 30 minutes early due to a conflict in room scheduling.

Thursday, December 2, 1971

CALL TO ORDER
The meeting was called to order at 9:05 A. M. by President Glen McDowell.

INVOCATION
The Invocation was given by Bill Harrison, Vice President, Region II, Leedey, Oklahoma

JAY BENHAM

Jay Benham, Administrative Secretary, National FFA Alumni Association was introduced. Mr. Benham's remarks included: -
....Purposes of the Association
....Membership slow, with 1100-1200 members at present
....Asked for suggestions
....Suggest that NVATA pass resolution in support

MOTION

It was moved by Fred Beckman seconded by Bill Harrison and carried that a letter in support of the Alumni Association be developed.

MOTION

It was moved by Bill Harrison and seconded by Fred Beckman that Luther Lalum and John Elliott be reimbursed for expenses incurred in representing NVATA at the AVA Task Force meeting on Career Education held on Thursday, December 2nd in Portland. Motion carried.

MOTION

It was moved by Bill Harrison and seconded by Millard Gundlach that committee members pay the $3 registration fee and that no claim for reimbursement be made. Motion carried.

AVA VICE PRESIDENT FOR AGRICULTURE

Mention was made of the fact that a new AVA Vice President for Agriculture would be elected for a 3 year term at the Chicago Convention and that if the regular rotation was followed a teacher of Vocational Agriculture would be elected.

AVA DIRECT MEMBERSHIP

Evidence was presented showing that the AVA was soliciting direct membership in some states. It was suggested that a determination be made as to AVA's future plans for this activity which tends to circumvent the state Vocational Associations as well as the state Vocational Agriculture Teacher's Associations which have been serving as a "Collection Agency" for many years.

RECESS AND CALL TO ORDER

The meeting was recessed at 11:30 A. M. and was called to order again at 12:45 P. M.

AVA INSTITUTIONAL MEMBERSHIP

Institutional membership in AVA was explained by President McDowell. The Committee did not go on record in favor or in opposition to the proposal.

FFA FOUNDATION PROPOSAL

It was moved by Millard Gundlach, seconded by D. P. Whitten and carried to again make a $1,000 contribution to the National FFA Foundation.

ENCYCLOPEDIA BRITTANICA OFFER

A letter from a representative of Encyclopedia Brittanica presenting a Commercial offer to NVATA was read by the Executive Secretary. Bill Harrison moved that the offer be declined. After a second by Fred Beckman, the motion was carried.

LEADERSHIP FOR 10,000

Sam Stenzel gave a progress report on the slide series he is developing on - "Leadership for 10,000" and asked that a committee be appointed to meet with

him from 10:00 - 12:00 A. M. on Friday to assist in selecting slides and in preparing script for the series. President McDowell appointed all the Vice Presidents to serve on the committee.

JIM DOUGAN INTRODUCED

Mr. Dougan, State Supervisor, Ohio and serving for 90 days as a Special Assistant to Dr. Worthington, Associate Commissioner for Vocational Education, appeared before the Committee. Comments and/or statements by Mr. Dougan included -

....Assignment is to develop plans and establish objectives for Vocational Agriculture.
....Developing standards and developing curriculum.
....Working on Career Education Program.
....Asked NVATA to identify major concerns of Vocational Agriculture Teachers.
....There is a lack of leadership in State Supervision.
....In some instances teachers are being trained as they were 25 years ago.
....Urged NVATA to continue to nurture their relationship with the USOE.

THIRTY MINUTE CLUB RULES AND CERTIFICATES

It was recommended that the following changes be made in the rules:

....Include radio and TV in rule 5.
....Change "Exchange of Ideas" to "Ideas Unlimited" in rule 3.

Bill Harrison moved that the above recommendations be accepted and that Sam Stenzel select a committee to meet at this convention to redesign the certificate. The motion was seconded by Fred Beckman and carried.

RICHARD HANSEN - GEIGY

Mr. Hansen, a representative of Geigy Agricultural Chemicals reviewed the NVATA Professional Award Program sponsored by Geigy. A complete revision of the scorecard was proposed by Mr. Hansen and after several changes, was accepted by the committee on a motion made by Fred Beckman and seconded by Odell Miller.

RECESS AND CALL TO ORDER

The meeting was recessed at 2:45 P. M. and called to order again at 3:00 P.M.

NVATA - USOE RELATIONS

President McDowell commented on the fact that he has been involved in numerous meetings called by the USOE and is frequently recognized as a very important force in education circles.

NVATA - NASDA RELATIONS

President McDowell reported that he was exceptionally well received at the convention of the National Association of State Departments of Agriculture. Several members commented on the good relationships existing between the Vocational Agriculture Teachers' Association and Department of Agriculture in their state.

EDUCATION NEWS SERVICE

It was moved by Bill Harrison, seconded by Howard Teal and carried to subscribe for the Educational News Service for the National Office.

POSITION PAPER ON FFA

It was noted that the AATEA is now represented on The National FFA Board of Directors in an ex-officio capacity as is the NVATA.

It was recommended that The Board be requested to fund NVATA and AATEA representatives.

Howard Teal moved that President McDowell prepare a position paper on the FFA to be presented for consideration of the Executive Committee at their Summer Meeting. The motion carried after a second by Fred Beckman.

B. O. A. C. PROGRAM

It was agreed that NVATA should encourage members to support the program.

BLUE COATS FOR AMERICA

The new program approved by the FFA Board of Directors was explained by President McDowell and Past President Gundlach.

REGIONAL COORDINATORS FFA FOUNDATION SPONSORING COMMITTEE

It was agreed that a list of the Regional Coordinators should be secured and included in a Newsletter with a recommendation that state associations make a special effort to become acquainted with their representative.

TASK FORCE REPORT

It was noted that a position paper had been developed and that it would be discussed at the Ag Division business meeting.

SILVER ANNIVERSARY CONVENTION - ATLANTA, GEORGIA

A committee composed of Sam Stenzel, Chairman - Bill Harrison, Odell Miller, Francis Murphy and D. P. Whitten were appointed to start making plans with one-half day of the '72 Summer Meeting of the Executive Committee being devoted to planning. Glen McDowell and James Wall were named as ex-officio members of the committee.

SUGGESTIONS - CAREER ORIENTATION PROGRAM

The Executive Secretary, James Wall, reported that Walter Jacoby, Panel Chairman, would appreciate having suggestions for operation of the panel. The committee expressed complete confidence in Dr. Jacoby and no suggestions were made.

USE OF THE FFA EMBLEM

Certain unauthorized uses of the emblem were discussed. No official action was taken.

NEWSLETTERS

The importance of regular Regional Newsletters was discussed. The Executive Secretary James Wall asked that all newsletter copy sent to the National Office be double spaced.

POLICY - STATE ASSOCIATION VISITS

It was moved by Bill Harrison, seconded by Fred Beckman and carried to Amend Section II, #2 of the NVATA Policies by adding the following sentence: "In problem or special situations the Regional Vice President in consultation with the President and Executive Secretary shall determine action in regard to second visits".

ACTIVE MEMBERSHIP

The membership status of supervisors and teacher educators was discussed. No action was taken.

AVA BYLAWS PROPOSAL

After a thorough review by Bill Harrison of a proposal to amend the AVA Bylaws, it was moved by Odell Miller, seconded by Fred Beckman and carried that the NVATA Executive Committee recommend to NVATA members sitting as AVA Delegates, oppose the proposal as written and that they support an NVATA substitute proposal.

AG TEACHER DIRECTORY - COMMITTEE REPORT

The report was given by Howard Teal, Committee Chairman. It was moved by Odell Miller, seconded by Howard Teal and carried that the report be printed and distributed by Vice Presidents at their Regional Meetings and that the proposal be discussed and opinions secured.

BUDGET COMMITTEE REPORT

The report was given by Sam Stenzel Chairman, who moved that copies be printed and distributed at Regional Meetings. The motion carried after a second by Fred Beckman.

REGIONAL CITATION GUIDELINES COMMITTEE REPORT

The report was given by Fred Beckman, Chairman. Sam Stenzel moved that the report be accepted. The motion was seconded by Fred Beckman. Motion carried.

NOMINATIONS FOR PRESIDENT AND TREASURER

The section of the NVATA Bylaws dealing with nominations was read by the Executive Secretary who also gave the names of persons eligible according to said Bylaws.

The President, Glen McDowell appointed Millard Gundlach, D. P. Whitten and James Wall as tellers. After a secret ballot it was announced by the tellers that Howard Teal had been nominated. It was moved by D. P. Whitten, seconded by Bill Harrison and carried that a unanimous ballot be cast for Howard Teal.

After a secret ballot it was announced that Sam Stenzel had been nominated as Treasurer. Odell Miller moved that a unanimous ballot be cast for Sam Stenzel. The motion was seconded by Fred Beckman. Motion carried.

ADJOURNMENT

There being no further business, President McDowell declared the meeting adjourned at 5:30 P. M.

Respectfully submitted,
JAMES WALL
Executive Secretary
Box 4498
Lincoln, Nebraska 68504

SPECIAL EXECUTIVE COMMITTEE MEETING

Monday, December 6, 1971
Studio Suite
Portland Hilton Hotel

CALL TO ORDER

The meeting was called to order at 10:30 A. M. by President Glen McDowell. All members were present.

PROPOSED AMENDMENT TO THE AVA CONSTITUTION

Bill Harrison reviewed what history he had been able to secure relative to development of the proposal to Amend Article XII of the AVA Constitution. According to available information, the Amendment was prepared by AVA Counsel and the AVA Board apparently was not aware of its implications.

Bill explained a substitute proposal he had prepared after which Millard Gundlach moved to accept the proposal. After a second by Odell Miller, the motion passed.

Bill Harrison moved, Francis Murphy seconded and the motion was carried to accept the following procedure:

Present substitute proposal to AVA Policy Committee.
If endorsed by Policy Committee present proposal to Bylaws Committee.
If not accepted by either or both as a substitute motion, NVATA will present the substitute proposal to the AVA House of Delegates.

REGIONAL ACTION REGARDING PURCHASE OF AG TEACHERS DIRECTORY

Region I	Very little interest.
Region II	No Interest.
Region III	No interest.
Region IV	30 - 6 against.
Region V	Little interest, develop own.
Region VI	In favor if could be secured for $20,000.

MOTION - PURCHASE OF DIRECTORY

It was moved by Sam Stenzel and seconded by Millard Gundlach that the Directory not be purchased. Motion carried.

RESOLUTION COMMITTEE OPERATING POLICIES

Sam Stenzel moved the current chairman of the NVATA resolutions committee revise the operating policies for the committee. The motion was seconded by Millard Gundlach. Motion carried.

LETTER - DENVER SEMINAR ATTENDEE

A letter was read from a teacher member of NVATA requesting partial reimbursement for expenses incurred attending a meeting of the summation committee in Washington. It was determined that according to NVATA Policy the claim could not be paid. Millard Gundlach moved that the individual be so advised. The motion was carried after a second by Odell Miller.

OPERATIONS UP-DATE SEMINAR COMMITTEE

It was moved by Odell Miller and seconded by Bill Harrison that President Glen McDowell and Executive Secretary James Wall inquire of Paul Gray, National FFA Executive Secretary as to why teachers are not to be represented on the National FFA Seminar set for March 6-10, 1972 in Washington, D. C.

ADJOURNMENT

There being no further business, President McDowell declared the meeting adjourned at 11:50 A. M.

Respectfully submitted,
JAMES WALL, Executive Secretary
Box 4498
Lincoln, Nebraska 68504

FINAL EXECUTIVE COMMITTEE MEETING

Tuesday, December 7, 1971
Studio Suite
Portland Hilton Hotel

CALL TO ORDER

The meeting was called to order by President Howard Teal at 1:15 P. M. All committee members were present. Retiring officers Millard Gundlach and Fred Beckman also were present.

APPRECIATION CERTIFICATES

Certificates of Appreciation were presented as follows:

...Glen McDowell to retiring past president Millard Gundlach.
...Glen McDowell to retiring vice presidents Fred Beckman and Howard Teal.
...Howard Teal to retiring President Glen McDowell.

LEADERSHIP CONFERENCE DATES

Region I	April 21-22	Boise, Idaho.
Region II	June 20-23	Las Cruces, New Mexico
Region III	June 15-16	River Falls, Wisconsin
Region IV	June 23-24	Murray, Kentucky
Region V	June 22-23	Huntsville, Alabama
Region VI	Aug. 6-8	Pennington, New Jersey

LEADERSHIP SEMINAR

It was moved by Bill Harrison, seconded by Francis Murphy and carried to establish February 18, 19 and 20 as dates for the Executive Committee Leadership Seminar to be held at NVATA Headquarters in Lincoln, Nebraska.

SEMINAR PLANNING SESSION

Luther Lalum moved that Millard Gundlach be authorized to meet in Lincoln with the Executive Secretary, James Wall, to plan for the Leadership Seminar. The motion was seconded by Jim Shadle and passed.

PARTICIPANTS - LEADERSHIP SEMINAR

It was moved by Glen McDowell and seconded by Odell Miller that the President and the Executive Secretary select the group to attend the Leadership Seminar. Motion passed.

SUMMER MEETING

Bill Harrison moved that the Summer Meeting of the Executive Committee be held in Lincoln, Nebraska beginning at 9:00 A. M. on July 3 and ending at noon on July 6. The motion was seconded by Luther Lalum. Motion carried.

REPRESENTATIVE - AVA ADVISORY COUNCIL

It was moved by Bill Harrison and seconded by D. P. Whitten to change NVATA Policy # II-1 to read that "the alternate be a first year Vice President appointed by the President. Motion carried and Luther Lalum was appointed by President Teal.

AG DIVISION NOMINATING COMMITTEE

Bill Harrison moved that the President and Executive Secretary appoint the NVATA representative. The motion was seconded by Luther Lalum. The motion carried and Bill Harrison was appointed.

ASSISTANT EXECUTIVE SECRETARY

It was moved by Glen McDowell and seconded by Luther Lalum that Millard Gundlach and James Wall serve as Co-Chairman of a committee to be named by them and that the Committee develop a job description and begin seeking applicants for the position of NVATA Assistant Executive Secretary. Motion carried.

ADJOURNMENT

There being no further business, President Teal declared the meeting adjourned at 3:30 P. M.

Respectfully submitted,
JAMES WALL
Executive Secretary
Box 4498
Lincoln, Nebraska 68504

MINUTES OF THE FIRST GENERAL SESSION

Saturday, December 4, 1971

Portland Hilton Hotel
Ballroom B

CALL TO ORDER

The meeting was called to order at 9:00 A. M. by President Glen McDowell. There were approximately 350 in attendance.

INVOCATION

The Invocation was given by D. D. Oliver, State President and Teacher of Vocational Agriculture, Abingdon, Virginia.

SPECIAL PRESENTATION

Jerry Greer, Kentucky Association President, on behalf of the Kentucky Association, presented a large gavel to President McDowell.

REPORT OF THE PAST PRESIDENT - (See Appendix - Page 6)

The report was given by Millard Gundlach who moved that it be accepted. After being properly seconded, the motion carried.

REPORTS OF THE REGIONAL VICE PRESIDENTS - (See Appendix - Page 13)

The reports were given as follows: -

Region I	Fred Beckman
Region II	Bill Harrison
Region III	Francis Murphy
Region IV	Odell Miller
Region V	D. P. Whitten
Region VI	Howard Teal

Cedric Gowler of Illinois moved that the reports be accepted. The motion was seconded by George Dunsmore of Vermont. Motion carried.

TREASURER'S REPORT - (See Appendix - Page 55.

The report was given by Sam Stenzel who moved that it be accepted. After a second by Dick Strangeway of New York, the motion was passed.

PRESIDENT'S REPORT - (See Appendix - Page 59)

The report was given by Glen McDowell. After being properly moved and seconded to accept the report, the motion carried.

GREETINGS

Verlin Hermann, President of the Oregon Association extended greetings on behalf of Oregon and all of Region I.

Outstanding Young Member Awards

Charles W. Bourg, Manager, Agricultural Supplies and Marketing, United States Steel Corporation, Pittsburg, Pennsylvania presented plaques to the following who had been judged as the most Outstanding Young Teacher in their respective Regions: -

Region I	Ed Strong, Payette, Idaho
Region II	Allen Nelson, Fort Morgan, Colorado
Region III	Lee Mendenhall, New Richland, Minnesota
Region IV	Gary Bauer, Sunbury, Ohio
Region V	James Watson, Smithville, Tennessee
Region VI	David Miller, Gaithersburg, Maryland

GREETINGS

Grant Esplin, Beaver, Utah, a Past President of The National Association of County Agricultural Agents, extended greetings on behalf of his Association. He expressed regrets that the current President, Douglas Strohbehn, was unable to attend due to illness in his family.

INTRODUCTIONS

Introductions were made by President McDowell as follows: -

.....Mrs. Fred Beckman, Weiser, Idaho.
.....Mrs. Charles Bourg, Pittsburg, Pennsylvania
.....Mrs. Glen McDowell, Pikeville, Kentucky
.....Past National Officers
.....State Supervisors
.....Teacher Educators
.....Don McDowell, Madison, Wisconsin
.....Walter Jacoby, Washington, D. C.
.....Phil Schmidt, Chicago, Illinois

GREETINGS

Gordon Galbraith, Supervisor of Agricultural Education, State of Oregon and Ag Division Program Committee Chairman welcomed the delegates and guests to Oregon.

THANKS TO U. S. STEEL

Lee Mendenhall, New Richland, Minnesota, speaking on behalf of the NVATA Outstanding Young Member Award" winners, expressed appreciation to U. S. Steel sponsors of the program.

NOMINATING COMMITTEE REPORT

Millard Gundlach, Chairman of the Nominating Committee reported that the NVATA Executive Committee, setting as a nominating committee, had nominated Howard Teal for President and Sam Stenzel for Treasurer.

Mr. Gundlach moved that the report be accepted. The motion was seconded by George Dunsmore of Vermont. Motion carried.

President McDowell called for nominations from the floor for both offices and none were made. McDowell announced that the election would be held at the Second General Session.

DRAWING FOR DOOR PRIZES

A drawing for door prizes donated by the State Associations of Arizona, California and Idaho was held and the winners were:

....W. E. Cooper of Alabama an electric drill
....Harold Barton of Iowa - $25.00 in cash
....Paul Dixon of Tennessee - Fishing lures

ANNOUNCEMENTS

The following announcements were made by the Executive Secretary: -

..... Ideas Unlimited judges are to meet at 5:00 P. M. Sunday in Studio Suite.

.....Registration will continue in Directors Suite.
.....State Presidents pick up tickets for dinner.
.....Members of President's Panel meet with Francis Murphy.
.....Tickets for door prizes will not be issued after meeting is called to order.
.....Reviewed program for remainder of the day.

ADJOURNMENT

President McDowell declared the meeting adjourned at 10:15 A. M. as scheduled.

Respectfully submitted,
JAMES WALL
Executive Secretary, NVATA

SPECIAL PROGRAM

Saturday, December 4, 1971

Portland Hilton Hotel
Ballroom B

The meeting was called to order at 1:30 P. M. by Millard Gundlach, Past President of NVATA. Approximately 500 were in attendance.

The Invocation was given by James Simmons, State President and Teacher of Vocational Agriculture, Omaha, Nebraska.

Mr. Gundlach introduced guests at the speakers table as follows: -

C. M. Lawrence, AVA President for Agriculture of Florida.
Julian Carter, President of NASAE of Vermont.
Gene Love, President of AATEA of Missouri.
Glen McDowell, President of NVATA of Kentucky.
James Wall, Executive Secretary of NVATA of Nebraska.

Also introduced were: -

Andy Bassel, State President and Teacher of Vocational Agriculture, Gunnison, Colorado - Recorder.
Joe Hartley, State President and Teacher of Vocational Agriculture, Batesville, Mississippi - Host.

Mr. Gundlach introduced, Donald McDowell, Executive Director, National FFA Foundation Sponsoring Committee who in turn introduced the speaker, Dr. Robert Worthington, Associate Commissioner, Adult, Vocational and Technical Education. After an informative and challenging address, Dr. Worthington answered questions from the audience.

The meeting adjourned promptly at 2:30 P. M.

Respectfully submitted,
James Wall
Executive Secretary, NVATA

MINUTES OF THE SECOND GENERAL SESSION

Sunday, December 5, 1971

Portland Hilton Hotel
The Galleria

CALL TO ORDER

The meeting was called to order at 10:00 A. M. by President Glen McDowell. Approximately 350 were in attendance.

INVOCATION

The Invocation was given by Roy Esser, State President and teacher of vocational agriculture, Kewaskum, Wisconsin.

GREETINGS FROM AATEA

Gene Love, President of American Association of Teacher Educators and Head Teacher Educator, Columbia, Missouri extended greetings on behalf of the members of his organization.

INTRODUCTIONS

President McDowell made the following introductions: -

Linville Hardin, State President and Teacher of Vocational Agriculture
Houston, Missouri - host.

Curtis Jensen, State President and Teacher of Vocational Agriculture
Garrison, North Dakota - Recorder

PROFESSIONAL STATE ASSOCIATION AWARDS

President McDowell presented framed certificates to Presidents of Associations who qualified for the award as follows: -

Region I - Arizona, California, Montana, Oregon, Utah, Washington and Wyoming.

Region II - Colorado, Kansas and Oklahoma.

Region III - Iowa, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin.

Region IV - Illinois, Michigan, Missouri, Kentucky and Ohio.

Region V - Georgia, North Carolina and Tennessee.

Region VI - New York, Pennsylvania, Vermont, Virginia and West Virginia.

GREETINGS FROM AVA

C. M. Lawrence, AVA President for Agriculture extended greetings on behalf of the American Vocational Association.

REPORT OF EXECUTIVE SECRETARY - (See appendix - Page 61)

The report was given by James Wall. Jim Guilinger of Illinois moved that the report be accepted. After a second by Grover Miehe of Iowa, the motion was carried.

GREETINGS FROM NASAE

Julian Carter, President of the National Association of State Supervisors of Agricultural Education and State Supervisor of Vermont, extended greetings on behalf of NASAE.

PFIZER AWARDS

Pete Johnson, Pfizer District Manager, Spokane, Washington presented trophies and $500 checks to the Advisors of the National FFA Foundation Award Winners, in Dairy, Livestock and Poultry farming. The winners were:

Roy Reno - Wyoming - Livestock Farming.

Ed Fisher - California - Dairy Farming.

Jerry Sherwin - Wisconsin - Poultry Farming.

CAREER ORIENTATION AWARDS

Plaques were awarded to the Regional Winners of the "NVATA Career Orientation Contest", by Dave Kramer, Assistant Communications Supervisor, New Holland Division of Sperry Rand. Receiving plaques were:

Region I - Dan Birdsell, Washington
Region II - Eugene Ruby, Colorado
Region III - Don Leibelt, Wisconsin
Region IV - Glen Griffith, Ohio
Region V - Guy Angel, North Carolina
Region VI - Oscar Harris, West Virginia

GREETINGS - NATIONAL SAFETY COUNCIL

Phil Schmidt, Rural Youth Specialist, Farm Conference, National Safety Council Chicago, Illinois, extended greetings on behalf of his organization.

GEIGY AGRICULTURAL CHEMICALS TOUR OF EUROPE

Richard Hansen, Publicist, Geigy Agricultural Chemicals, Division of Geigy Chemical Corporation, spoke on behalf of the sponsoring organization.

Donald Kabler, Corvallis, Oregon, 1971 tour winner, reported on his trip.

AGRICULTURAL EDUCATION MAGAZINE

Roy Dillon, Lincoln, Nebraska, Editor of the Agricultural Education Magazine spoke briefly about the magazine and urged teachers to write more articles.

NATIONAL FFA FARM MECHANICS CONTEST

Grover Miehe of Iowa and a teacher of vocational agriculture, represented the teachers on the National FFA Judging Contest Committee. Grover reported that a National Contest in Farm Mechanics would be held at the 1972 National FFA Convention.

NOMINATIONS AND ELECTION

President McDowell asked for nominations from the floor for the office of Treasurer.

A delegate from Ohio moved that nominations be closed. The motion was seconded by George Dunsmore of Vermont. Motion carried.

It was moved by Jim Ferries of Wisconsin, seconded by Eldon Aupperle of Illinois and carried that a unanimous ballot be cast for Sam Stenzel. President McDowell declared Mr. Stenzel elected.

President McDowell asked for nominations from the floor for the Office of President.

George Dunsmore of Vermont moved that nominations be closed. The motion carried after a second by Dick Strangeway of New York.

Dick Strangeway of New York moved that a unanimous ballot be cast for Howard Teal. The motion was seconded by Grover Miehe of Iowa. Motion carried and President McDowell declared Mr. Teal elected.

ANNOUNCEMENTS

The Executive Secretary, James Wall made the following announcements: -

Favors will be handed out from 2:00-5:00 P. M. on Monday, in the Studio Suite.

Copies of the Secretary's report available at the door.

Reviewed program for the remainder of the day.

Breakfast is scheduled for 7:30 A. M. Monday.

DOOR PRIZES

Door prizes provided by the Montana, Nevada and Oregon Associations were won by - Gerald Barton of Iowa, Ralph Moffatt of Tennessee and Dan Birdsell of Washington.

ADJOURNMENT

President McDowell declared the meeting adjourned at twelve noon.

Respectfully submitted,
JAMES WALL
Executive Secretary, NVATA
Box 4498
Lincoln, Nebraska 68504

MINUTES OF THE FINAL GENERAL SESSION

Tuesday, December 7, 1972 — Portland Hilton Hotel, Ballroom A

CALL TO ORDER

President McDowell called the meeting to order at 9:15 A. M.

INVOCATION

The Invocation was given by Clark Cleveland, State President and Teacher of Vocational Agriculture, Hinsdale, Montana.

INTRODUCTIONS

Denver Jones, State President and Teacher of Vocational Agriculture, Waldron, Arkansas - Host.

Willie B. Owens, State President and Teacher of Vocational Agriculture, Bamberg, South Carolina - Recorder.

RESOLUTIONS COMMITTEE INTRODUCED

Millard Gundlach, Resolutions Committee Chairman, introduced the Committee.

Region I	Fred Faulks, Idaho.
Region II	Andy Bassel, Colorado.
Region III	David Flint, Iowa.
Region IV	William Harrison, Michigan.
Region V	Jimmy Morris, Alabama.
Region VI	Richard Strangeway, New York.

REPORT OF THE RESOLUTIONS COMMITTEE - (See appendix - Page 68)

Jim Ferries of Wisconsin moved that the appreciation resolutions be adopted as printed. The motion was seconded by John Murray of Wisconsin. Motion carried.

Action was taken on other resolutions as follows:

SPECIAL APPRECIATION RESOLUTIONS

#1 - Dr. Robert Worthington - moved by T. C. Weaver of Georgia, seconded by Marlin Wacholz of Minnesota. Carried.

#2 - Agricultural Business and Organizations - Moved by Norman Bohmbach of Minnesota, seconded by James Pollman of South Dakota. Carried.

COMMITTEE RESOLUTIONS

#1 - Ag Division Task Force. Moved by Fred Faulks of Idaho, seconded by Verlin Hermann of Oregon. Carried.

#2 - National FFA Alumni Association. Moved by Weber of Louisiana, seconded by Roy Reno of Wyoming. Carried.

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#3 - Tort Liability Insurance. Moved by William George of Georgia, seconded by George Dunsmore of Vermont. Carried.

REGIONAL RESOLUTIONS

#1. - NVATA Office Relocation - After considerable parliamentary maneuvering, John Mundt of Idaho moved to postpone the resolution indefinitely. The motion was seconded by Lowell Hillen of Illinois. Motion carried.

#2. - Establishment of a Bureau of Occupational Education - Moved by Harry Karpaik of New York, seconded by Leslie Olsen of Kansas. Carried.

#3. - Veterans Farm Training - Moved by Floyd Hager of Missouri, seconded by a delegate from Alabama. Carried.

#4. - NVATA Officers Visits to State Associations - Moved by John Murray of Minnesota, seconded by Robert Phillips of Ohio. Carried.

#5. - Teacher Training in Agriculture Education - Moved by Keith Griffin of Michigan, seconded by Kenneth Brashaber of Indiana. Carried.

#6. - Support of USDA - Moved by John Mundt of Idaho, seconded by Rick French, of North Carolina. Carried.

#7. - National FFA Judging Contest - Moved by Jerry Greer of Kentucky, seconded by Cedric Cowler of Illinois. Carried.

SPECIAL APPRECIATION RESOLUTION - (See Preface)

Chairman Gundlach read a special resolution of appreciation to Jim and Georgia Wall.

Jack Humphrey of Wyoming moved that the resolution be adopted. The motion was carried after a second by David McVey of Texas.

AMENDMENTS TO NVATA BYLAWS

It was moved by Norman Bohmbach of Minnesota, seconded by Palmer Eidet of South Dakota to - amend Article III, Section 2, Part (a) to read - "Active Membership -- shall be defined as persons professionally qualified and certified by the state certifying agency, to teach Vocational Agriculture or any course related thereto requiring an understanding and knowledge of agriculture, employed as a teacher of Vocational Agriculture on at least a one-half time basis, including secondary teachers, Junior College teachers and teachers in community colleges and University systems or similar nomenclature of programs offering less than a baccalaureate degree in Vocational Agriculture and who are members of affiliated state associations of agriculture teachers."

Lew Ayers of Pennsylvania moved to amend the motion by inserting the word "elementary" before secondary. The motion was seconded by George Dunsmore of Vermont. The amendment carried and the motion as amended carried.

It was moved by Peter Edgecomb of Maine, seconded by Richard Strangeway of New York and carried to - amend Article III, Section 3, to read as follows: - (a) Voting -- "The privilege of voting shall be restricted to active members"; (b) Holding office -- "The privilege of holding office shall be restricted to teachers of Vocational Agriculture except as provided in Article IV, Section 5".

It was moved by Gayle Pettit of Kentucky, seconded by George Dunsmore of Vermont and carried to - amend Article IV, Section 5, - Opening paragraph to read as follows: -

"Officers shall be elected from the active membership. In case any officer ceases to be employed as a teacher of Vocational Agriculture, he may continue to serve in that office until the next annual meeting provided that he remains in the field of education. A President in the above situation may serve as past president for the year immediately following, provided he continues to be in the field of education. In the event that an officer ceases to teach Vocational Agriculture and also leaves the field of education, his office shall be declared vacant immediately and filled as follows:". - (Refer to Parts A & D of NVATA Bylaws)

It was moved by Vernon Luft of Montana, seconded by Marlin Wacholz of Minnesota and carried to - amend Article III, Section 4, part (a) to read -

"Active, affiliate and direct membership dues shall be $8.00 annually starting July 1, 1972, and $10.00 annually starting July 1, 1974."

Dave Cox of Arizona moved to amend the motion by striking out $8.00 and inserting $10.00 and to omit - "starting July 1, 1972 and $10.00 annually starting July 1, 1974." Motion to amend and the motion as amended both carried. The vote on the amendment was 75 for and 23 against.

SUBSTITUTE PROPOSAL FOR ARTICLE XII OF AVA BYLAWS

Bill Harrison of Oklahoma moved, Bill Harrison of Michigan seconded and the motion was carried to endorse the following substitute proposal for Article XII of the AVA Bylaws.

* * * * * * * *

A. All proposed amendments must be in the hands of the Executive Director 6 months prior to the date set for the Annual Convention.

B. Proposed amendments shall have been approved by at least one Division of the Association, or approved by at least one affiliated Association or approved by the Bylaws Committee, or approved by the AVA Board of Directors.

C. Proposed amendments shall be reviewed by the Bylaws Committee, and said Bylaws Committee may recommend acceptance or rejection.

D. Proposed amendments shall be printed in an issue of The American Vocational Journal two months prior to the convention and the affiliated Associations shall be notified of proposed amendments at least 60 days prior to the Annual Convention by the Executive Director.

E. The proposed amendments shall then be submitted in writing to the House of Delegates at a regular meeting during the Annual Convention.

F. Amendments to the Bylaws shall be by a majority vote of all members of the House of Delegates present and voting at the Annual Convention, and unless otherwise provided by the amendment, they shall be effective immediately on their adoption by the House of Delegates.

G. The Articles of Incorporation may be amended only by a two-thirds vote of all members of the House of Delegates present and voting at the annual convention and such Articles of Incorporation shall be amended only as provided by the laws of the State of Indiana.

NOTE: The proposal was later adopted by the AVA House of Delegates.

INVITATION TO 1972 CONVENTION

Lowell Hillen, President of the Illinois Association, invited the delegates to attend the 1972 Convention to be held in Chicago, Illinois.

ALTERNATE VICE PRESIDENTS INTRODUCED

Alternate Vice Presidents for 1971-72 were introduced as follows:

Region I	Roy Reno, Wyoming
Region II	Ray Seale, Texas
Region III	John Murray, Minnesota
Region IV	Jim Guilinger, Illinois
Region V	H. I. Jones, Georgia
Region VI	George Dunsmore, Vermont

NEWLY ELECTED VICE PRESIDENTS

Fred Beckman, retiring Vice President for Region I introduced the new Vice President - Luther Lalum, Kalispell, Montana.

Howard Teal, retiring Vice President for Region VI, introduced the new Vice President - James Shadle, Hegins, Pennsylvania.

AWARDS PRESENTED

President McDowell presented the following awards:

TO - Fred Beckman and Howard Teal, retiring Vice Presidents - a plaque and a Life Membership in NVATA.

TO - Bill Harrison and Odell Miller, Vice Presidents completing their first year of service - NVATA National Officer Service Keys.

REMARKS BY THE RETIRING PRESIDENT

Glen McDowell made the remarks which follow:

* * * * *

As I have traveled about this Nation and met with teachers of Vocational Agriculture, people in government, state supervisors, teacher educators, and listened and observed, what I heard and witnessed, when coupled with the knowledge I believe I have of what it is all about in this day and age we live in, I can't help but feel it is a must that this organization

continue to remain strong -- not only for ourselves, and maybe our selfish interests, but for this Nation. I believe all of us here can defend this position anywhere and say that we feel teachers of Vocational Agriculture are in top position to effect the happenings in our land.

I am going to give a few charges to you as your retiring President. If you have not done this, do it! Structure your State Association to involve your membership. This can be done by or through:

1. Constitution
2. Aims and purposes adopted
3. Committee structure
4. Program of Work
5. Communications system you have -- and we all should know this means person-to-person, personal letters, and news letter contacts to members

Gentlemen, you cannot place a high enough value on an effective, up-to-date communications system to members. Some one has to take time out, however, to do this.

And, I want to ask have you done this?

.. Organized and put into action a state support committee;

.. Set up and put into action a legislative committee;

.. Organized a past president's committee, or Association or Orgainzation;

.. Established a top to bottom and up communications system among the members in your state, among the lay citizenry and to government (when I say government here, I mean to our school officials and to our elected officials);

.. Attained 100% membership or near to that figure;

.. Faced unafraid and with faith in our cause the issues of the day;

.. Entered the NVATA contests and awards programs;

.. Made reports on time to your National organization?

The past is prologue and is here defined this way....."Prologue is the introduction to a play and in turn the past can only be an introduction to the future." So, although the past of the NVATA, Agricultural Education and the FFA is a great one indeed, past achievements can only serve us as an introduction to the future.

Will you be disciples of change and not its victims? I would say to you.. stand tall, stand firm, and keep your powder dry! The future looks good. And, you have been most kind to me.

* * * * * * *

PASSING THE GAVEL

President McDowell introduced the new President, Howard Teal of Boonville, New York and turned the gavel over to him.

PRESENTATION TO RETIRING PRESIDENT

President Teal presented an engraved gavel and plaque to Glen McDowell the retiring President.

OFFICER CHARGE AND INSTALLATION

The "Charge" to all officers was given by retiring Past President, Millard Gundlach.

ACCEPTANCE SPEECH

Howard Teal, newly installed President, made the following remarks:

* * * * * *

I realize that election to this office is the highest responsibility that can come to a teacher of Vocational Agriculture. I accept this gavel with all humility and can only hope that I am equal to the task.

I realize also, that I will be following in the footsteps of many outstanding leaders over the years - not the least of which is our now Past President, Glen.

My first aim will be to continue the fine work which these men have initiated and pursued. The last few years the NVATA has taken many new steps forward so that it is now recognized as the organization where the action is. The status of Vocational Agriculture, at all levels, has improved considerably; the last two years. The NVATA, in cooperation with its sister organizations can take a large measure of credit for this.

In the area of member information and relations a considerable improvement has taken place. We have reversed the trend in the membership percentage. Several new services to members have been implemented.

Today we took a big step forward in voting a dues increase to make our association financially more sound and in a position to continue presently expanded member services and to make possible the implementation of several more that are now in the planning stage. A number of other important decisions have been or will be made at this convention that will have a marked effect on the future of our organization. One of special note, I will point out to you.

Your Executive Committee has taken action to set up a Leadership Training Seminar for all NVATA Vice Presidents that it is hoped will considerably enhance their ability, in turn, to provide leadership training for state association officers.

Jim Wall has already mentioned to you the need to add an Assistant Executive Secretary. Action will need to be taken here, and I agree with Jim that it should be done with all deliberate speed.

I personally feel that all of the organizations in the Agricultural Division need to work more closely together to effectuate our common goals and resolve our common problems.

I forsee an extremely busy and important year ahead for the NVATA, and if we make good and sound decisions, I also forsee a very fruitful one.

On my part I can only pledge you this: I WILL EXERT EVERY EFFORT, IN THE CONFINES OF MY ABILITY, RESOURCES AND PHYSICAL STAMINA, TO WORK FOR THE GOOD OF THE NVATA AND THE PROFESSION OF EDUCATION IN AGRICULTURE. I BELIEVE THAT I CAN ALSO PLEDGE THIS SIMILAR EFFORT ON THE PART OF OUR ENTIRE EXCELLENT EXECUTIVE COMMITTEE WITH YOUR SUPPORT AND COOPERATION WE CAN MOVE AHEAD.

I most sincerely thank you for your confidence in selecting me for this leadership position.

May we all have a good trip home and a good year ahead.

* * * * * * * * *

ANNOUNCEMENTS

The following announcements were made by the Executive Secretary, James Wall.

..Entrants in "Ideas Unlimited Contest" check with your Regional Vice President. He has a ball point pen for you.

..See Mrs. Wall for extra convention pens. She still has a few for sale.

..Materials on the table, including President McDowell's talk, may be picked up as you leave the meeting.

..Please remain for the Ag Division Business meeting which will be held in this room immediately following adjournment.

..Extra favor bags will be available after 12:00 noon in the Studio Suite.

..Regional publicity committee members have negatives of pictures taken.

..Orders will be accepted for the Convention Slide Series until December 10.

..Award winners can pick up their pictures at the NVATA Office after noon today.

..News releases on new officers will be available at the NVATA Office after 4:00 P. M. today.

..The NVATA Office will be closed at 7:00 P. M. tonight.

DOOR PRIZES

Winners of door prizes provided by the Utah, Washington and Wyoming Associations were:

Gerald Wagner, South Dakota - Fish Eggs.
Guy Angel - North Carolina - Blanket
Rees Kilgore, Albama - Gold Fleece

ADJOURNMENT

President Teal declared the meeting adjourned at 10:45 A. M.

Respectfully Submitted,
JAMES WALL
Executive Secretary, NVATA
Box 4498
Lincoln, Nebraska 68504

MINUTES OF REGIONAL MEETINGS

REGION I

FIRST SESSION
December 4, 1971

PORTLAND HILTON HOTEL
Parlor F

The meeting was called to order by Region I NVATA Vice President Fred Beckman.

Sixty-eight members were present from the following states: -

Arizona 4, California 2, Idaho 3, Montana 8, Nevada 1, Oregon 21, Utah 7, Wyoming 6 and Washington 16.

Chairman Beckman presented 100% membership buttons to delegates from Montana, Utah and Wyoming.

Eugene Forrester gave a Public Relations Committee report announcing the opportunity for states to order the convention slide series for $10.00 on a pre-pay basis.

Fred Faulkes, chairman of the Resolutions Committee announceed that all resolutions must be acted upon by the Region and turned over to the NVATA Executive Committee within 6 hours after the last Region meeting.

Clark Cleveland, Chairman of the State Presidents Panel asked for written comments from the State Presidents on the subject, "What Makes Your State Association Strong"? This would provide background for his panel report at the President's Dinner.

Wyoming moved that the election for Region I Vice President and Alternate Vice President be held at 3 o'clock, December 5. The motion was seconded by Oregon. The motion passed.

Nominations were opened for Region I Vice President. Luther Lalum and John Elliot were nominated.

Nominations were opened for Alternate Vice President. Roy Reno was nominated. There were no further nominations.

The State Association reports were passed out for reviewing. The oral report will be given at the Second Regional Meeting.

The AVA Task force reports were distributed with the evaluation forms. Members were asked to complete the evaluation forms.

The FFA Supply Service and Magazine were discussed. The following general comments were made:

...1. The size of the FFA Magazine is becoming smaller and has fewer articles and more advertizing.
...2. The FFA Notebooks in quality and price leaves something to be desired.
...3. Cheap packaging for mailing seemed to be a general problem.
...4. It was suggested that the Region investigate the possibility of being able to purchase metallic emblems for their own mounting on Chapter designed awards. Chairman Beckman recommended that chapters contact the Advisory Board and the FFA Supply Service on all poor services that are rendered.

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Chairman Beckman asked for discussion on the Agricultural Directory purchase possibility. Numerous opinions pro and con were expressed. No final recommendation was made.

The Region I meeting was adjourned at 4:30 for preparation of the NVATA Reception.

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SECOND SESSION
December 5, 1971

HEATHMAN HOTEL
Parlor C

The meeting was called to order by Vice President Fred Beckman.

Jack Humphrey of Wyoming gave his report of the National FFA Judging Contest Committee actions. The proposed Agriculture Mechanics Contest was discussed and the minutes of the special study committee was reviewed.

Jack Humphrey informed the group that out of the $85,000.000 budgeted by the National FFA Association for the contests, only $25,000.00 went to the participating FFA members. A plea was made for ideas and recommendations from the State Associations.

The Oregon delegation moved that Region I recommend to the NVATA Executive Committee that the NVATA take over the operation of the National FFA Judging Contest if the opportunity arises. The motion was seconded and passed.

A motion was made that Region I go on record as not supporting any current action to move the NVATA office from the present Nebraska location. This motion was seconded and carried. A motion was made that Region I be opposed to any Constitutional Change that would form any possible block of Democratic process in the AVA by restricting the present flow of resolutions. This motion was seconded and passed.

The following convention proposal was recommended by individuals in Region I: -

....1. That meetings not be scheduled at the same time and that a little more freedom of time be allowed.

Chairman Beckman recommended that members send letters of appreciation to persons and companies on the list provided in the NVATA registration packet.

A motion was made, seconded and approved that this group adopt a resolution that the majority of the National FFA Contest rules committee be composed of practicing High School Agricultural Instructors and FFA Advisors.

Clark Cleveland of Montana moved that a unanimous ballot be cast for Roy Reno of Wyoming as Region I Alternate Vice President for the ensuing year. Verlin Herman of Oregon seconded the motion. The motion carried.

Verlin Herman moved that the Regional Leadership Conference be held in Boise on April 21 and 22 in conjunction with the Pacific Region Supervisors Meeting. The motion was seconded and carried.

A motion was made that Region I recommend a NVATA dues increase of $5.00. The motion was seconded and passed.

1995

It was recommended by the group that the NVATA produce a fact sheet for membership promotion information on where the National Dues goes.

The election for Region I Vice President was held. Luther Lalum was elected as the new Vice President for Region I.

An expression of appreciation was applauded to Fred Beckman for his outstanding work as Region I Vice President.

The meeting was adjourned at 3:30 P. M.

Respectfully submitted,
LUTHER LALUM
Alternate Vice President
Region I
Kalispell, Montana 59901

* * * * * * * *

REGION I - REGISTRATION

ARIZONA

T. O. Beach - Yuma
Harold M. Byram - Sun City
David E. Cox - Sells
Clair Decker - Phoenix
Clinton O. Jacobs - Tucson
M. Dean Merrell - Casa Grande
Carlos H. Moore - Phoenix

CALIFORNIA

Ed Fisher - Hilmar
Parker Foster - La Jolla
Dennis Hampton - Davis
Ray House - Riverside
Osmund Gilbertson - San Luis Obispo
E. David Graf - Sacramento
E. M. Juergenson - Davis
Donald Kross - Sacramento
Edward Leal - Modesto
Paul Peterson - Chino
W. P. Schroeder - San Luis Obispo
Harold L. Seigworth - Riverside
O. E. Thompson - Davis
Don Wilson - Sacramento

IDAHO

Fred Beckman - Weiser
Joe Cvancara - Moscow
Ralph Edwards - Boise
Fred Faulks - Parma
Robert Haynes - Moscow
Leslie Jackson - Pocatello
D. L. Kindschy - Moscow
John Mundt - Boise
Ed Strong - Payette

MONTANA

Basil C. Ashcraft - Helena
Max Amberson - Bozeman
Douglas Bishop - Bozeman
Mike Cavey - Bozeman
Clark W. Cleveland - Hinsdale
Loyal Dean Kauffman - Bozeman
Luther Lalum - Kalispell
Daniel W. Lantis - Sheridan
Jim Lewis - Helena
Vernon D. Luft - Chinook
Gail Stensland - Benton

NEVADA

Roy Faught - Lund
Ronald E. Squires - Reno

OREGON

Ralph Anderegg - Aurora
Jerry A. Booth - Hillsboro
Richard Boucher - Enterprise
Richard Buckovic - Molalla
Garth Davis - Hermiston
Jack Dube - Medford
Ernest DeAlton - Newberg
Burr Fancher - Lebanon
Gordon Galbraith - Salem
A. R. Gilmore - Warrenton
Verlin K. Hermann - Broadbent
Gregory A. Johnson - Molalla
Wayne E. Johnson - St. Helens
Don Kabler - Corvallis
Norman Keesler - Vale
Earl A. Knight - Sherwood
Curt Loewen - Salem

1996

REGION I - REGISTRATION

OREGON - (continued)

Leonard Lombardi - Enterprise
Sidney Miles - Forest Grove
Frank A. Miller - Milton-Freewater
H. Lloyd Mills - Forest Grove
Wright Noel - Bend
Charles M. Porfily - Lebanon
Leonard Rice - Springfield
W. C. Reif - Canby
William Sawyer - Cornelius
Roger E. Schoenborn - Astoria
Jerry Settelmeyer - Milwaukie
Jerry Shiveley - Gladstone
Stanley Sisson - Milwaukie
Wynn Sutfin - Tangert
James B. Thomas - Hillsboro
Walden Wedon - Milton - Freewater
Joe Witty - Adrian
Gary Wood - Molalla
Alan Yenne - Lebanon

UTAH

Neil F. Christensen - Brigham
Fred Cornaby - Provo
Keith W. Hatch - Logan
Robert R. Jensen - Garland
Gilbert A. Long - Logan
Leslie B. Winter - Spanish Fork
Byron Mermott - Lehi

WASHINGTON

Roger Beckel - Grandview
Dan Birdsell - Deer Park
Frederic A. Blauert - Washtucna
Charles Clark - Walla Walla
Robert J. Corless - Sunnyside
Arnold Wayne Davis - Toppenish
Wayne R. Davis - Fillah
Leonard Derr - Ferndale
John W. Elliot - Cheney
L. J. Emerson - Omak
Keith E. Fiscus - Pullman
H. Eugene Forrester - Ellensburg
A. W. Heideman - Wenatchee
Lynn M. Heininger - Wenatchee
Clarence Hull - Pullman
Lyle Holt - Bridgeport
C. O. Loreen - Pullman
Kenneth Milholland - Tumwater
Arthur Nelson - Olympia
H. C. Nelson - Mt. Vernon
Ralph 1. Olmstead - Battleground
Ken Owen - Tacoma

WASHINGTON - (continued)

George S. Peterson - Granger
George E. Roberts - Wenatchee
James A. Stillwell - Wapato
Dennis R. Swanberg - Brewster
Rodney Tulloch - Pullman
Donald R. Wamstad - Davenport
Jay Wood - Olympia

WYOMING

Jim Durkee - Laramie
Jim Facinelli - Cody
Jack Humphrey - Albin
Percy Kirk - Cheyenne
Roy E. Reno - Riverton
Connie Sutton - Powell
Loren York - Lander
Jim Wilson - Glendo

LADIES

Arizona - 0
California - 5
Idaho - 4
Montana - 0
Nevada - 0
Oregon - 9
Utah - 0
Washington - 14
Wyoming - 2

REGION II

FIRST SESSION
December 4, 1971

YMCA BUILDING
Room 3F

The Region II Vice President, Bill Harrison, called the First Regional Meeting to order at 2:45 P. M. Thirty-seven members were present.

The Invocation was given by Ray Seale, Past President of the Texas Association, asking Gods' Blessing on our Sincere Efforts.

Item three and four on the Agenda, the welcome and introduction of guests were accomplished quickly, since there were none.

Les Olsen of Kansas and Coy Jaggers of Texas moved and seconded to adopt the Agenda Motion passed by voice vote.

Our Vice President announced that pictures would be taken during the break and that Portland Convention pens would be sold at 25¢ each.

Andy Bassel of Colorado moved and Coy Jaggers of Texas seconded to approve the minutes of the prior Summer Conference at Dodge City, Kansas. Carried by voice vote.

State reports were given. A copy will be on file at the National Office.

Arkansas - Not present - no report given.
Colorado - Andy Bassel, President gave the report.
Kansas - Les Olsen, President gave the report.
Louisiana- Leighman Martin, President gave the report.
New Mexico - Dwight Houston, President gave the report.
Oklahoma - Jim Boston, President gave the report.
Texas - Herman Stoner, President gave the report.

Glen McDowell, NVATA President and Cliff Saylor, National FFA Vice President from Arizona made brief remarks, offering their help if needed.

Bill Harrison gave the following figures on the membership report. These were the latest certified figures.

Kansas - 186 members - 4 delegates present and 5 delegates allowed.
Colorado - 82 members - 3 delegates present and 3 delegates allowed.
Arkansas - 224 members - no delegates present and 5 delegates allowed.
Louisiana - 245 members - 5 delegates present and 6 delegates allowed.
New Mexico - 86 members - 100% - 2 delegates present and 3 delegates allowed.
Oklahoma - 408 members - 100% - 9 delegates present and 9 delegates allowed.
Texas - 760 members - 11 delegates present and 16 delegates allowed.

There are a total of 1991 members - 34 delegates present and 47 delegates allowed in Region II.

Mr. Harrison gave a report on all Region memberships and increases in membership, and Region II stood tall in comparison with all other Regions.

The Alternate Vice President gave a report on activities since Dodge City Summer Conference. He stated that Bill Harrison's visit to the Texas State Conference and his speech to the membership is largely the cause of an increase in membership from that state.

After the Texas conference the Alternate Vice President and Vice President visited [illegible] delegation stressing the importance of dues. This along with President Rupert Mansell's persistency brought New Mexico into the 100% fold. The Alternate Vice President and Vice President visited the conference for about 3 days and were given a nice introduction at their state AVA banquet. It was also stated by the Alternate Vice President that Bill Harrison had as his goal an increase in membership and that he had worked hard toward that goal and the results are evident in the above figures.

The Ideas Unlimited Contest was explained by our Vice President. We were reminded of changes in the rules and encouraged to participate. Andy Bassel of Colorado asked if Item #9 in the rules could be changed to allow representation. Our leader said he would check into it.

The publicity report was given by Leighman Martin, President of the Louisiana Association. He encouraged the membership to fill out the fliers in our folder and leave them in the Headquarters Office. Also he stated that states would have to make their own arrangements for their group pictures before leaving the conference.

Chairman Bill Harrison announced that the film presentation worked up by Sam Stenzil called "Highlights of NVATA" is available at $10.00 per set to all states.

Andy Bassel, President of Colorado in his resolutions committee report stated that their committee had not completed their functions and had to report back to complete the review of resolutions. Colorado presented a resolution for consideration by Region II, concerning move to Washington, D. C. Andy Bassel of Colorado moved and Ray Seale of Texas seconded the motion that the resolution be accepted. The motion was carried by voice vote.

Then came the break during which time pictures were taken, printed material concerning transitions in Ag Education, questionnaire on reactions to National Seminar, Denver, and consideration NVATA purchase of Ag Teachers Directory.

The meeting reconvened at 4:22 P. M. after a seven minute break.

We picked up item 16 on the Agenda. Bill Harrison stated that the key to active membership was in the young teachers coming into the profession. He informed the assembly that all states in Region II increased their student membership in NVATA. The FFA Alumni Association was then presented, explained and urged.

Our worthy chairman then gave in detail facets concerning above printed material. He then outlined our status concerning considerations in the purchase of the National Directory & Handbook and said that this was for discussion and consideration and not necessarily for action. However, Harold Williams moved and Les Olsen seconded a motion that Region II go on record as opposing the purchase of said Directory and Handbook. After some discussion the motion carried by voice vote.

The Vice President moved through the next four items of business in quick order and stated that we should thank the sponsors of our activities and show our appreciation to them.

He called for state conference dates, spoke of state newsletters and reminded the states that this was one of the qualifications for the state association award.

1999

Then the states were tactfully reminded of the importance of promptness in return-

Nominations were accepted for Alternate Vice President of Region II. The nominees were Ray Seale of Texas and Jack McClasky of Kansas.

The time was 4:52 and our leader declared adjournment until 1:15 P. M. Sunday, December 5, Parlor D, Portland Hilton Hotel.

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SECOND SESSION
December 5, 1971

PORTLAND HILTON HOTEL
Parlor D

At 1:15 P. M. the second session of Region II NVATA was firmly called to order by Vice President, Bill Harrison.

Guests, Jim Beech of Oklahoma, Bob Nattery of Colorado and Dr. Robert Price of Oklahoma were introduced to the 42 members present.

Beginning business with awards. The delegation was urged to increase participation and were told of changes in The Geigy Award. Also, that the "30 Minute Club" certificate will be changed.

Bill explained the proposed Bylaws Amendments.

Dwight Houston, President from New Mexico obtained the floor and gave quite a pitch for presented information concerning the Region II Summer Conference to be held in Las Cruces, New Mexico, June 20-23, 1972. He warned of, but did not dwell, on the hazards of fast horses and faster women.

At 2:35 P. M. we reconvened after a 7 minute break without losing a man. In fact we gained one who was introduced as Lloyd Wiggins, a guest from Oklahoma.

Andy Bassel handed out the printed resolutions and completed his report of the resolutions committee. After reviewing the printed resolutions Jim Boston of Oklahoma stated that he had voted on the prevailing side and moved that we reconsider the motion on Region II Resolution concerning the move of NVATA Headquarters to Washington, D. C. Les Olsen seconded the motion. The motion to reconsider failed. By show of hands 13-15.

Item 23 on the Agenda was opened but Arkansas had no futher information concerning 1973 Summer Conference for Region II.

The floor was turned over to the Alternate Vice President for comments. He stated that in addition to his prior report he had helped register at this convention and would help judge the "Ideas Unlimited Contest". He further explained the Ben Miller boot deal, its inception and present status and a few ground rules involved. His conclusive statements were bent toward gratitude for the opportunity to work with such a fine group, having learned so much from Bill Harrison and his appreciation for Bill's leadership ability. Actually he began his comments with a joke, but not being much of a story teller, the groups response silently told him why he was not re-elected.

Master Bill Harrison appointed the Presidents of Arkansas, (Chairman), Oklahoma and New Mexico to handle the balloting in the election of the Alternate Vice President of Region II, NVATA.

Ray Seale, Texas was elected. His acceptance speech, which was nothing, was better than the outgoing Alternate Vice President's joke.

Region II's choice Vice President made his report by stating that it has been a fulfilling year after, at first, many qualms and discouragements. He took a second look and hit the road. He visited the Kansas Association Conference, conducted the Dodge City Conference, went to Lincoln, Nebraska for the Executive Committee meeting, visited the Texas Convention, The Oklahoma Conference, the New Mexico Conference and then came to Portland determined to do all he could for Region II and our membership as a whole. He commended individuals and state associations and the collective membership. In closing Bill asked for assistance and invitations to State Meetings. He had kind and bordering on untruthful words for the Alternate Vice President.

There being no unscheduled or new business, final announcements were made and on a happy, inspirational note adjournment was declared at 3:25 P. M. by a very thorough and able Bill Harrison.

Respectfully submitted,
DAVID T. McVEY
Alternate Vice President
Region II
El Paso, Texas 79999

* * * * * * *

REGION II - REGISTRATION

ARKANSAS

James E. Gambill - Brookland
Luther Hardin - Searcy
Denver B. Jones - Waldron
James H. Shepard - Little Rock

COLORADO

B. Harold Anderson - Fort Collins
Andy Bassel - Gunnison
Irving C. Cross - Fort Collins
Sidney E. Koon, Jr. - Fort Collins
Allen H. Nelson - Fort Morgan
Al Renzelman - Holyoke
Eugene P. Ruby - Denver
Ron Uhrig - Fort Morgan

KANSAS

James Albracht - Topeka
Leslie A. Olsen - Clay Center
Jack E. McClaskey - Girard
Larry Erpelding - Manhattan
Joe Farrell - Hill City
Robert E. Julian - Manhattan
Steve Reedy - Concordia
Sam Stenzel - Colby

LOUISIANA

Tom Colvin - Baton Rouge
Charlie M. Curtis - Baton Rouge
Leighman Martin - Provencal
Ledell D. Virdure - Baton Rouge
Richard Weber - Baton Rouge
James C. Weber - Delhi

NEW MEXICO

Lowery Davis - Las Cruces
Charles Grimshaw - Fort Sumner
Dwight O. Houston - Hurley
Warren G. Noland - Las Cruces
Parker Woodul - Portales

OKLAHOMA

Jim Boston - Adair
Clifford Christ - Wewoka
Charles Hargrave - Antlers
Bill Harrison - Leedey
Wendell Fenton - Muskegee
Byrle Killian - Stillwater
Kent Metcalf - Altus
Ernest H. Muncrief - Marlow
Robert Price - Stillwater

OKLAHOMA - (continued)

Don Rudy - Alva
Joe D. Skinner - Oklahoma City
Charles Spencer - Elgin
Jim Straum - Clinton
Harold Williams - Cushing

TEXAS

Chester Booth - Whitney
F. M. Brownfield - Colorado City
Jose Correa - Mission
James E. Christiansen - Bryan
Lewis Eggenberger - Lubbock
James Elliott - San Marcos
James L. Graves - Powderly
A. C. Hughes - Commerce
Coy R. Jaggers - DeKalb
Earl H. Knebel - College Station
Sidney J. Long - Gail

TEXAS - (continued)

David T. McVey - El Paso
W. H. Meischen - Austin
G. H. Morrison - Huntsville
Foy Page - Bryan
C. G. Scroggins - Austin
Ray Seale - Shiner
Herman H. Stoner - Sherman
Harold D. Walker - Hico

LADIES

Arkansas - 0
Colorado - 2
Kansas - 1
Louisiana- 1
New Mexico-0
Oklahoma - 4
Texas - 4

2002

REGION III

FIRST SESSION
Saturday, December 4, 1971

HEATHMAN HOTEL
Parlor C

Region III meeting was called to order by Vice President Francis Murphy at 2:48 P. M. in Parlor C of the Heathman Hotel.

Norman Bohmbach of Minnesota gave the Invocation.

General announcements were given by Vice President Murphy, and the Agenda was presented.

It was moved by John Murray of Minnesota, seconded by Dave Flint of Iowa to adopt the minutes as printed by Secretary Grover Miehe of Iowa. Motion carried.

Introduction of state delegates included Iowa - 11; Minnesota - 14; Nebraska-5; North Dakota - 1; South Dakota - 4; and Wisconsin - 11.

Voting strength by states and membership reported to be :

Iowa - seven delegates - 286 members
Minnesota - eleven delegates - 477 members
Nebraska - four delegates - 170 members
North Dakota - three delegates - 95 members
South Dakota - two delegates - 71 members
Wisconsin - seven delegates - 318 members

Comments were made concerning registration, voting cards, thank you lists, etc.

It was announced that The FarmFest would be held September 11-17, 1972, at Vernon Center, Minnesota.

Each member was urged to give consideration to the purchase of the Ag Teachers' Directory and Handbook.

Dave Flint of Iowa member of the resolutions committee presented preliminary information on resolutions. It was moved by Wacholz of Minnesota and seconded by Esser of Wisconsin to refer the USDA resolution to a committee of Ferries, Flint and Murray. Carried.

Resolution No. 2 - Moved by Ferries of Wisconsin seconded by Hill of Minnesota to adopt--carried. This was appreciation to President Glen McDowell.

Resolution No. 3 -- NVATA officers visits to State Associations. Moved by Esser of Wisconsin seconded by Wacholz of Minnesota to adopt. Carried.

Resolution No. 4 -- Veterans' Farm Training -- Moved by Bahmbach of Minnesota, seconded by Statler of Iowa to adopt. Carried.

Resolution No. 5 -- Establishment of the Bureau of Occupational Education. Moved by Maurina of Wisconsin to strike out the last three lines after (public law 90-576). Seconded and carried. Moved by Simmons of Nebraska and seconded by Murray of Minnesota to adopt as amended, carried.

Introduction was made of Glen McDowell, NVATA President and Cliff Saylor, National FFA Vice President of Arizona.

The meeting was recessed to take pictures of each state delegate group. Following this recess, Roy Esser of Wisconsin publicity chairman, presented his report. Moved by Flint of Iowa, seconded by Kubista, Minnesota to accept the report. Carried.

The procedure for electing Alternate Vice President was presented.

Poll of states was taken for the nomination of Alternate Vice President. All states passed with the exception of Wisconsin. Roy Esser nominated John Murray of Minnesota. There were no other nominations.

The state presidents gave reports of association activities since the Regional Meeting in Brookings, South Dakota. Each President distributed a copy of his report to the members and a copy will be on file at the National Office.

With time running late, Vice President Murphy recessed the meeting at 5:15 P. M. until Sunday, December 5 at 1:15 P. M.

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SECOND SESSION
Sunday, December 5, 1971

PORTLAND HILTON HOTEL
Parlor E

The second session of Region III convened by order of Vice President Francis N. Murphy at 1:20 P. M. in Parlor E, Hilton Hotel.

Announcements were made by Chairman Murphy.

A report of National Judging Contests and recommendations were presented by special committee member Grover Miehe, of Iowa. A brief discussion followed.

Alternate Vice President, Grover Miehe, presented his report. Moved by Murray and seconded by Soldwish of Iowa to accept the report. Carried.

Miehe of Iowa presented the "30 Minute Club" report which stated that 160 certificates were distributed during the year. He urged the members to keep up the good work.

Murphy encouraged all states to continue participation in awards for instructors and Association, "Ideas Unlimited" Contest.

The NVATA registration fee received no unfavorable comments. The increase in AVA registration fee was in question.

It was moved by Esser of Wisconsin and seconded by Schock of Nebraska that nominations cease. Carried. Moved by Eidet of South Dakota, seconded by Jochem of Nebraska that John Murray of Minnesota be elected unanimously as Alternate Vice President of Region III. Carried.

It was announced that the 1972 Summer Leadership Conference would be held at the University of Wisconsin, River Falls, June 15-16.

2004

Dates of the State Association Summer Conferences were announced as follows:

Iowa	Downtown Holiday Inn, August 10-11
Minnesota	Minneapolis-Nicollet Hotel, July 6-8
Nebraska	Omaha, July 13-15
N. D.	Bismark, no date
S. D.	No place or date
Wisconsin	Madison, July 10-14

It was stated that Vice President Murphy had visited all state conferences except Wisconsin. State officers were encouraged to visit other State Conferences.

It was moved by Ferries, Wisconsin, seconded by Barber, Minnesota, that Region III go on record as favoring the USDA Support resolution. Carried.

Statler of Iowa moved and Hermance of Nebraska seconded that the resolutions committee report, presented by Flint of Iowa be accepted. Carried.

Bohnbach of Minnesota moved and Soldwish of Iowa seconded the Vice President's report be accepted. Carried.

It was moved by Hermance of Nebraska and seconded by Webster of Iowa that we recommend that Region III support the dues increase as suggested by the Executive Committee. Discussion followed. Motion carried.

Murray of Minnesota and Schock of Nebraska seconded that Region III favor the hiring of an Assistant Executive Secretary if the increase in dues is approved. Discussion followed. Motion carried.

It was moved by Esser of Wisconsin and seconded by Hill of Minnesota that Region III go on record as not in favor of the purchase of the Vo Ag Teachers Directory at any price. Carried unanimously.

The Alumni FFA was discussed with emphasis on local grass roots initiation rather than from National emphasis on down.

It was indicated that the AVA Constitutional changes in the making would have a tendency to kill democratic action on the part of members.

It was moved by Jensen of North Dakota and seconded by Simmons of Nebraska that we dispense with the President's Panel. Carried. Materials were distributed.

John Murray of Minnesota was officially installed as Alternate Vice President of Region III by Vice President Francis Murphy.

It was moved by Hermance of Nebraska and seconded by Wacholz of Minnesota that all members of Region III recognize the outstanding work of Alternate Vice President, Grover C. Miehe of Iowa during the past year, and thank him for his efforts. Carried.

Soldwish, of Iowa moved and Hermance of Nebraska seconded that the meeting adjourn. Carried. Meeting adjourned at 3:40 P. M.

Respectfully submitted,
GROVER C. MIEHE
Alternate Vice President
Region III
Monticello, Iowa 52310

REGION III - REGISTRATION

IOWA

Garland Ashbacher - Swisher
Gerald F. Barton - West Des Moines
C. E. Bundy - Ames
Harold Crawford - Ames
David Flint - Hampton
Roger Holcomb - Mason City
Marvin Hoskey - Emmetsburg
Les Johnson - Rockwell City
Elwood J. Mabon - Des Moines
Bill McKeown - Mason City
Grover C. Miehe - Monticello
Reg Soldvish - Jewell
Richard Sparrow - Manchester
Logan Stamp - Sheldon
Larry Statler - Swisher
Paul B. Swank - Kalona
Jack Tatman - Spirit Lake
Lewis Webster - Leon

MINNESOTA

Donald Barber - Claremont
R. Barnwell - St. Paul
Norm Bohmbach - Waseca
Dale Busch - St. James
Paul Day - Faribault
Orrin Dybdahl - Grandfield
Ed Fier - New Ulm
Lowell V. Gunderson - Ada
Robert Hill - Tyler
Ronald Kubista - Olivia
Dennis Wallette - St. Paul
Leo K. Lick - Gaylord
Joe Malinski - Minneapolis
Paul Marvin - St. Paul
Lee Mendenhall - New Richland
John Murray - Jackson
Curtis Norenberg - St. Paul
Ed J. O'Connell - St. Cloud
James Pengra - Jackson
Vern Richter - Watertown
Gordon Swanson - St. Paul
Paul F. Thomas - St. Paul
Marlin Wacholz - Renville
Gerald Wagner - St.P Paul
Lelland Wilken - Osakis

NEBRASKA

Richard Douglass - Lincoln
Dennis W. Eggleston - Hyannis

NEBRASKA - (continued)

B. E. Gingery - Lincoln
Lyle Hermance - Lincoln
Dean Jochem - Ainsworth
Jim Leising - Franklin
Philip H. Miller - Mead
Myron R. Schoch - Lyons
James Simmons - Omaha
James Wall - Lincoln
Anton Wewel - Creighton

NORTH DAKOTA

Quentin Christman - Rugby
Winston Dolve - Fargo
Gerald Iverson - Minot
Curt Jensen - Garrison
Norbert Mayer - Bismarck
Shubel D. Owen - Fargo
Don Priebe - Fargo

SOUTH DAKOTA

David Acheson - Flandreau
Palmer Eidet - Volga
E. W. Gustafson - Pierre
Francis N. Murphy - Madison
James C. Pollman - Dell Rapids
Lawrence Venner - Pierre

WISCONSIN

Victor Bekkum - Hillsdale
Doyle Beyle - Madison
Roy Esser - Kewaskum
James Ferries - Manitowoc
Rudolph Geimer - Reedsburg
Millard Gundlach - Montfort
Robert Heebink - New Richmond
Irving E. Kelly - Harkin
Don C. Leibelt - Green Bay
William G. Maurina - Barron
Jim W. Olstad - Oregon
Wayne Raymond - Lancaster
Carl W. Schuster - West Allis
Jerry W. Sherwin - Cuba City

LADIES

Iowa - 9
Minnesota - 7
Nebraska - 3
North Dakota - 0
South Dakota - 5
Wisconsin - 4

REGION IV

FIRST SESSION
Saturday, December 4, 1971

HEATHMAN HOTEL
Parlor Room B

The first session of Region IV, NVATA was called to order, December 4, 1971 at 2:45 P. M. by Vice President Odell Miller. The Invocation was given by Warren Reed, Past President of the Ohio Vocational Agriculture Teachers Association.

Vice President Miller introduced the Regional Award winners in the Outstanding Young Member and Career Orientation Contests. Outstanding Young member Gary Bauer, Sunbury, Ohio and Career Orientation Winner Glenn Griffith, Westerville, Ohio.

NVATA membership buttons and ball point pens were distributed to the group.

The following State Presidents: Lowell Hillen of Illinois; Ken Brashaber of Indiana· Jerry Greer of Kentucky; Keith Griffin of Michigan; Linville Hardin of Missouri; and Robert Phillips of Ohio introduced the members from their respective states.

The names of the deceased members since the Summer Conference were entered and a moment of silence was observed. The following names were entered: Gordon Struble of Michigan; Paul Anderson and Don Tucker of Missouri.

Voting strength of the assembled delegates was determined by the following poll of the groups:

STATE	TOTAL MEMBERS	VOTING STRENGTH	NUMBER PRESENT TO VOTE
Illinois	330	8	8
Indiana	230	5	4
Kentucky	205	5	3
Michigan	137	4	3
Missouri	300	7	7
Ohio	474	10	10

A motion by Lowell Hillen of Illinois and seconded by Bill Harrison of Michigan was passed to have the minutes of the Summer Conference accepted as printed.

Vice President Miller suggested additional items be added to the Agenda and called for any additional items from the group.

A motion by Cedric Gowler of Illinois and seconded by Keith Griffin of Michigan was passed to accept the proposed Agenda with the additional items suggested.

President Glen McDowell spoke briefly to the group followed by Cliff Saylor, National FFA Vice President of the Pacific Region who welcomed the delegates to the Pacific Region.

The meeting recessed for 15 minutes in order that National Treasurer Sam Stenzel could photograph those state delegations in attendance.

Jay Benham spoke briefly to the group concerning the progress of the National FFA Alumni Association.

Bill Harrison of Michigan, Chairman of the Region IV Resolutions Committee reported to the group concerning any Regional Resolutions to be presented for consideration by the National Association.

A motion by Lowell Hillen of Illinois and seconded by Robert Phillips of Ohio was passed concerning the adoption for consideration by the Region of an Illinois Association resolution on Teacher Training in Agriculture Education at Illinois State University, Normal, Illinois.

Lowell Hillen of Illinois, Chairman of the Region Publicity Committee reported a set of slides were being developed about the convention and would be available at a later date. The cost will be $10.00 and the money must accompany the application requesting the slides.

Alternate Vice President, Jim Guilinger, distributed his report to the members present.

A roll call of states was called for nominations for Alternate Vice President and the following names were submitted: Jim Guilinger of Illinois and Bill Harrison of Michigan.

Vice President Miller summarized the following items on the Agenda for the Region to act upon in its second session:

1. Agriculture Directory proposal
2. AVA Relations with NVATA
3. Agriculture Education Magazine
4. Proposed AVA Amendment concerning the By-Laws Committee
5. Preparation of the most important problems concerning NVATA for Mr. Jim Dougan's use.
6. Ideas Unlimited Contest

Meeting adjourned at 5:00 P. M. until Sunday, December 5, 1971.

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SECOND SESSION
Sunday, December 5, 1971

HEATHMAN HOTEL
Parlor Room B

The second session of Region IV was called to order December 5, by Vice President Odell Miller. The Invocation was given by Linville Hardin, State President of the Missouri Association.

Mr. Don Coil, Illinois, Mr. W. H. Hamilton of Indiana, and Mr. R. D. Hagen of Missouri were recognized by the group as visitors.

Vice President Miller introduced the life NVATA members of Region IV:

Eldon Aupperle, Jim Guilinger, Charles Harn. Lowell Hillen, Cedric Gowler and Eldon Witt all of the Illinois Association.

Richard Barnes, Adelbert Huber and Stanley knopf of Michigan Association.

Region IV is the first NVATA Region to have paid life members.

Each State Association President was given five minutes to present the current

activities and status of their respective State Association.

MISSOURI again 100% membership, the only state in the Region. They also reported on their excellent relationships with their State Office and Teacher Training institution. ILLINOIS has developed an extensive legislative committee which has been very effective in serving an increase in FFA Fair Premium money for students. INDIANA is seriously considering the possible employment of an Executive Secretary. MICHIGAN has developed an effective legislative committee to contact their teachers and alert them to react to emergency situations concerning legislative bills. OHIO co-sponsors with the Ohio FFA a legislators breakfast which has proven to be a highly effective method of acquainting legislators with Vocational Agriculture and the FFA.

The delegates were asked to discuss the NVATA proposal concerning the purchase of the Agriculture Directory. After much discussion the delegates recommended by a substantial majority against the purchase of the Directory.

Bill Harrison of Michigan and Chairman of the Region IV Resolutions Committee reviewed the resolutions from the NVATA Resolutions Committee and reported a copy would be available at the final NVATA Session. The Illinois resolution concerning Teacher Training Institutions presented on Saturday was re-written by the delegates in order that it might be adopted by the Region.

A motion by Lon Possell of Missouri, seconded by Ken Brashaber of Indiana to adopt the revised Illinois resolution on teacher training institutions was passed and adopted as a Regional Resolution. (See NVATA Resolutions Committee Report).

Ned Stump, President Elect of Indiana was chosen to be Chairman of the Region IV Resolutions Committee for the coming year. The other members of the Committee will be the Presidents of the respective states in the Region.

The election of the Alternate Vice President was brought before the delegates. Bill Harrison of Michigan withdrew his name from nomination and moved to cast a unanimous ballot for Jim Guilinger of Illinois to serve another one year term. The motion was seconded by Robert Phillips of Ohio and passed.

The following Summer Conference dates are listed by each State:

Illinois - Champaign, Illinois - June 20-23, 1972
Indiana - Indianapolis, Indiana - August 13-16, 1972
Kentucky - Information not available.
Michigan - East Lansing, Michigan - July 25-28, 1972
Missouri - Columbia, Missouri - July 25-27, 1972
Ohio - Columbus, Ohio - July 10-12, 1972

The Regional Summer Leadership conference is to be held at Kenlake State Resort Park, Hardin, Kentucky, June 23 and 24, 1972. President Jerry Greer of Kentucky will send additional information to all State Presidents in the Region in April for reservations to be made.

Vice President Miller reviewed the new NVATA State Report form which must be completed in order that a State be recognized at the next NVATA Convention.

The following Ideas and Concerns of Agriculture Teachers were brought forth from the group which NVATA should consider:

A. Twelve months employment of Agriculture Teachers
B. Credit for industrial work on a salary schedule when employed as a teacher.
C. Encourage teacher training instututions to concentrate training of new Ag Teachers in skills and technical abilities instead of a broad track system of Education.
D. Re-emphasis that FFA Jackets have only appropriate items attached to them and be worn appropriately.
E. Develop better lines of communication within the NVATA from the top to the member and upwards.
F. Study the Funding of Vocational Agriculture programs and how they affect the local school.
G. Limitation of proper work in the form of extra reports to Governmental Offices.
H. Encourage the U. S. Labor Department to develop a much improved method of determining the number of persons needed to fill Agricultural jobs in the U. S. with more valid statistics.
I. Secure booklets from Standard Oil Company on hydraulics, diesel engines, etc. in quantity for use as instructional materials in high school and adult classes.

A motion by Ken Brashaber of Indiana, seconded by Jerry Greer of Kentucky was passed, commending Alternate Vice President Jim Guilinger for his excellent work during the past year.

The group commended Vice President Miller for his excellent work during the past year.

The meeting was adjourned at 3:15 P. M.

Respectfully submitted,
JIM GUILINGER
Alternate Vice President
Region IV
Sycamore, Illinois 60178

* * * * * *

REGION IV - REGISTRATION

ILLINOIS
Eldon Aupperle - Toulon
R. Donald Bateman - LeRoy
J. W. Berger - Charleston
G. Donavon Coil - Springfield
P. E. Cross - Dahlgren
John H. Feddersen - Milledgeville
Cedric Gowler - Centralia
Jim Guilinger - Sycamore
Charles L. Harn - Fairview
Lowell F. Hillen - Champaign
Lloyd J. Phipps - Urbana
Urban T. Oen - Joliet
Billy L. Rich - Sullivan
Fred Russell - Canton
Hollie Thomas - Urbana
John Matthews - Champaign
Eldon Witt - Roanoke
W. H. Witt - Urbana

INDIANA
Kenneth Brashaber - Bushville
James P. Clouse - Lafayette
W. H. Hamilton - West Lafayette
Larry Miller - Lafayette
Niles Pfafman - Fort Wayne
Ned Stump - LaGrange

KENTUCKY
Jerry Greer - Park City
Kenneth Harrison - Hartford
Robert L. Kelley - Frankfort
Alfred Maunebach - Lexington
Glen McDowell - Pikeville
James McGuire - Bowling Green
R. Gayle Pettit - Utica
Charles Wade - Frankfort
T. A. Zimmer - Bowling Green
Harold Binkley - Lexington

2010

MICHIGAN

Frank Bobbitt - East Lansing
Grant Fettig - Ferris Grant
Keith Griffin - Montague
Bill Harrison - Alto
O. Donald Meaders - Okemos

MISSOURI

Don Claycomb - Trenton
G. F. Ekstrom - Columbia
Ray Hagan - Jefferson City
Floyd Hager - Farmington
James Hamilton - Columbia
Linville Hardin - Houston
Amon Herd - Columbia
Carl M. Humphrey - Jefferson City
Dwight Jones - East Prairie
R. E. Linhardt - Columbia
Gene M. Love - Columbia
Donald D. Osburn - Columbia
Bill Richardson - Hallsville
Lon Rozell - Crane
Bob D. Stewart - Columbia
Wm. E. Waddell - Montgomery City

OHIO

Gary Bauer - Sunbury
Ralph Bender - Columbus
Homer Burt - Newark
Robert Brandt - Xenia
Ponney G. Cisco - Zanesville
James E. Dougan - Gahanna
G. N. Griffith - Westerville
Dan R. Grube - Eaton
Gilbert S. Guiler - Columbus
John Hillison - Columbus
J. David McCracken - Worthington
Franklin Miller - Groveport
Odell Miller - Raymond
Robert Norton - Columbus

OHIO - Continued

Jack Nowels - Loudonville
Joseph Parrish - Caldwell
Robert G. Phillips - London
Warren L. Reed - Convoy
Wade H. Reeves - Columbus
George F. Rhonemus - West Union
Harlan E. Ridenour - Columbus
Dwain Sayre - McCutchenville
Adam J. Sponaugle - Columbus
Louis C. Thaxton - Columbus
Robert Warmbrod - Columbus
Warren G. Weiler - Worthington
Ralph Woodin - Columbus

LADIES

Illinois - 10
Indiana - 1
Kentucky - 2
Michigan - 1
Missouri - 1
Ohio - 17

2011

REGION V

FIRST SESSION
Saturday, December 4, 1971

Heathman Hotel
Parlor A

The first session of Region V was called to order by Region V Vice President D.P. Whitten in the Heathman Hotel, Parlor A, December 4 at 2:45 P. M.

Invocation was given by Lloyd Smith of Mississippi and a cordial welcome extended by D. P. Whitten to delegates and guests present.

The State Presidents presented delegates from their respective states and each person was encouraged to attend the important and educational sessions of NVATA and AVA.

State associations with one hundred percent membership received their 100% pins, and a report of Region V's membership was given the delegation.

J. W. Brown of Florida, Public Relations Chairman for Region V, had a report for state association pictures. He stated no slides of convention highlights would be sent to any state association unless a check for ten dollars came with the order. The Region took a short break for state association pictures.

J. W. Brown stated that pictures could be picked up at the breakfast on Tuesday morning by the State Presidents.

J. Benham from the FFA Alumni Association was given time on the program to make a report on the members in Region V, and gave examples of what an Alumni Organization could do in each state with little effort by each Advisor.

The minutes of the Region V Leadership Conference were passed out, read and approved with necessary corrections. Motion made by J. M. Morris of Alabama and seconded by R. E. Balkom of Georgia.

Several items were added to the Agenda and a motion was made by Thomas Weaver of Georgia and seconded by Lloyd Smith of Mississippi to accept the Agenda. Motion carried.

Visitors to the Region were Glenn McDowell, NVATA President and Cliff Saylor National Vice President of FFA.

The resolutions chairman, Jimmy Morris, from Alabama gave a brief report on resolutions, and requested that all resolutions be written and turned into the NVATA resolutions committee right away.

The Ag Teachers Directory was brought up for discussion, along with a contract given each delegate to study and discuss. After much discussion by a show of hands Region V voted to work with a figure of $20,000.00 to $25,000.00 if the Executive Committee thought this was in the best interests of NVATA.

Thomas C. Weaver reported on the state President's Dinner and a few reports were needed to make Region V complete.

Remarks on the working relationship with the USOE and NVATA was given and this gave the entire Region V inspiration.

2012

The following teachers of Region V were congratulated as winners of the following awards: Russell Watson of Smithville, Tennessee, U. S. Steel winner and Guy Angel of Waynesville, North Carolina New Holland Award. Then the new filing system was presented, and many certificates that can be awarded along with the new ones. All delegates were asked if they had members in their states for Regional honors or recognition to have their names to the Vice President by December 5, 1971.

The Policies were then stated for electing the Alternate Vice President and the House was open for nominations. The following nominations were made: Glynn Key of Florida nominated by J. W. Brown of Florida; Ralph Moffatt of Tennessee nominated by John Leehman of Tennessee; H. I. Jones of Georgia nominated by C. P. Williams of Georgia. It was moved by R. E. Balkcom of Georgia and seconded by W. C. Parmer of Alabama that the nominations be closed on the three said names. Voted and passed. The meeting adjourned to meet December 5, 1971 at 1:15 P. M. to 3:30 P. M. in the Heathman Hotel, Parlor A.

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SECOND SESSION — HEATHMAN HOTEL
Sunday, December 5, 1971 — Parlor A

The meeting was called to order with Region V Vice President D. P. Whitten presiding. Invocation was offered by R. E. Balkcom of Georgia.

Plans for the 1972 Leadership School were discussed and it will be held in Alabama with a tour being arranged of Huntsville, Alabama.

The resolutions were presented for information and the main issue that did not receive a favorable report was the move of the NVATA Office. Amendments to the Constitution was then presented for consideration and any action that might take place for the next general session.

The Blue Coats discussion came to the floor as information for the alertness of the membership in Region V.

It was moved by R. E. Balkcom of Georgia after much discussion and seconded by W. H. McLeod that the Regional Citation be given next year to Outstanding Friends of Agriculture that had made contributions on more than a state basis, and amended by A. O. Ramay, Georgia that an application form be made out. Seconded by Lloyd Smith. John Leehman, of Tennessee made a motion to refer to a committee seconded by Lloyd Smith of Mississippi and a report be made in June. The motion passed. The committee appointed are as follows: R. E. Balcom, Chairman, W. S. Harmon, Jr., Thomas Weaver A. O. Ramay and H. I. Jones. The committee is made up of members of the Georgia Association.

Guy Angel winner of the New Holland Award from Waynesville, North Carolina was called upon to make remarks in regard to his winning of the contest.

The State reports were called for and the following information was given from each state:

1. Jimmy Morris of ALABAMA stated: Full allowance had been allowed to the convention because his state was 100% in membership.
2. J. W. Brown of FLORIDA stated his association gave door prizes at their convention and dues had to be paid in order to get prizes.

2013

3. H. I. Jones of GEORGIA stated support committees had helped Georgia in their state with Vocational Agriculture programs.
4. William George of GEORGIA stated their association plan to have a mid winter conference this year the the two programs are the same.
5. J. B. Hartley of MISSISSIPPI stated they had a Vocational Agriculture Teachers Conference for the first time in 8 years, and they plan to help bring Agriculture Teachers back together as they were before they stopped having conferences.
6. Lloyd Smith, MISSISSIPPI stated they had similar problems.
7. W. A. McLeod, Jr. of NORTH CAPOLINA stated, we had problems, however Agriculture programs are making progress and NORTH CAROLINA hal an increase in membership this year.
8. W. B. Owens, SOUTH CAROLINA stated, D. P. Whitten visited the Conference this year and a re-evaluation of Agriculture was going on in SOUTH CAROLINA especially production Agriculture.
9. Paul Dixon of TENNESSEE stated ag programs are making progress and they do have plans for a Summer Conference.

At this time the following people were named to count votes for the position of Alternate Vice President:

J. B. Hartley of Mississippi, W. B. Owens of South Carolina and Jimmy Morris of Alabama.

The following candidates were running for office:

Glyn Key of Florida, Ralph Moffatt of Tennessee and H. I. Jones of Ga.

After the votes were counted, H. I. Jones of Georgia was declared Alternate Vice President for Region V for 1972.

A motion was made by H. I. Jones of Georgia and seconded, thanking W. D. Neill for the work done in Region V this year.

W. B. Owens of South Carolina stated we should thank D. P. Whitten for the way he carried out his job as Vice President this past year. This was accepted by the entire Region.

W. D. Neill thanked the Region for the support given him as Alternate Vice President. As there was no further business, the meeting was adjourned.

Respectfully submitted,
W. D. Neill, Jr.
Alternate Vice President
Region V
Clarkton, North CArolina 28433

2014

REGION V - REGISTRATION

ALABAMA

Willis Bell - Red Level
Paul B. Holley - Auburn
W. E. Cooper - Tuskegee Institute
James Dennis - Clanton
Ben P. Dilworth - Montgomery
Earl R. Fisher - McIntosh
Jack N. Fowler - Russellville
H. W. Green - Auburn
S. H. William - Anniston
Reese Kilgore - Pine Hill
James Morris - Ohatchee
W. C. Parmer - Russellville
S. W. Simmons - Tuskegee Institute
Clifford Smith - Greensboro
M. D. Thornton - Montevallo
Elton Whatley - Ashland
D. P. Whitten - Centre
C. P. Williams - McKenzie

FLORIDA

Tom Barrineau - Tallahassee
J. W. Brown - Sneads
Troy W. Caruthers - Ocala
Thomas Cochran - Fort Mead
Reed Franz - St. Petersburg
James Hensel - Gainesville
C. M. Lawrence - Tallahassee
W. Travis Loften - Gainesville
William Priest, Jr. - Hawthorne
William Prinz - St. Petersburg
Marion C. Roche - Ocala
Glen C. Shinn - Gainesville

GEORGIA

R. E. Balkcom - Blakely
T. D. Brown - Atlanta
William George, Jr. - Metter
W. S. Harman, Jr. - Carrollton
H. I. Jones - Silver Creek
Linward E. McDowell - Brunswick
A. O. Ramay - Forsyth
Thomas C. Weaver - Braselton

MISSISSIPPI

Tom Ellis - Jackson
Joe B. Hartley - Batesville
Willie F. Jackson - Lorman
Jasper Lee - State College
Carl Loftin - Jackson
Troy Majure - Jackson
Lloyd Smith - Cleveland

NORTH CAROLINA

Guy Angel - Waynesville
Nick French - Cary
W. T. Johnson - Greensboro
W. A. McLeod, Jr. - Red Springs
M. D. Myers - Jamesville
W. D. Neill, Jr. - Clarkton
M. J. Rountree - Nashville
C. C. Scarborough - Raleigh

SOUTH CAROLINA

Earl Carpenter - Clemson
R. C. Chastain - Greer
J. Alex Hash - Clemson
Hugh McClimon - Anderson
Willie Owens - Bamberg
Dr. Robert White - Clemson

TENNESSEE

Donald C. Baucon - Knoxville
William Coley - Mt. Juliet
Paul Dixon - Calhoun
Howard Downer - Knoxville
LeeRoy Kiesling - Martin
Ralph Moffatt - Millington
John Leeman - Goodlettsville
James Watson - Smithville

LADIES

Alabama - 2
Florida - 1
Georgia - 1
Mississippi - 2
North Carolina - 1
South Carolina - 0
Tennessee - 0

2015

REGION VI

FIRST SESSION
Saturday, December 4, 1971

HEATHMAN HOTEL
Parlor "D"

CALL TO ORDER

The first session was called to order by Vice President Howard Teal at 3:00 P. M.

INVOCATION

The Invocation was given by George Dunsmore, President, Vermont Association.

ANNOUNCEMENTS

Vice President Teal informed the delegates that the prior report informing the delegates that James Shadle was ineligible for office was no longer true since the facts on which the Executive Committee based their decision were not accurate and therefore they reversed their decision. President Teal wanted to inform the delegates immediately on this decision.

MATERIALS DISTRIBUTED

Program Development Task Force Report was distributed. A reaction sheet of this report was also distributed to be turned in the next day.

State Officer list was distributed.

State Conference Annual Information List was distributed. Two copies are to be returned to Teal.

Teal gave the 1971 convention highlights - checked on meal tickets and contest winners.

FFA ALUMNI ASSOCIATION

Jay Benham of the FFA Alumni Association was given the floor to promote this association. He explained its purpose, what is needed to charter an association within a state and some expected news releases in the near future.

CERTIFICATION OF DELEGATES

The following delegates were certified per state with the corresponding number present:

Connecticut	2 delegates certified and one was present
Maine	1 delegate certified and none were present
Maryland	2 delegates were certified and none were present
Massachusetts	2 delegates certified and none were present
New Jersey	1 delegate certified and none were present
New York	3 delegates certified and two were present
Pennsylvania	4 delegates certified and four were present
Rhode Island	1 delegate certified and none were present
Vermont	2 delegates were certified and one was present
Virginia	8 delegates certified and eight were present
W. Virginia	2 delegates certified and two were present

100% MEMBERSHIP

Vermont, Virginia, Rhode Island will receive 100% certificates.

Virginia and Rhode Island were 100% for five continuous years; therefore, these states will be receiving special plaques. 100% membership buttons were distributed to these states.

MINUTES

Dick Strangeway, New York, moved, seconded by Dr. Smeltz of Pennsylvania that the minutes be approved as printed. Motion passed.

AGENDA

The agenda was reviewed and the following items were added by Vice President Teal:

36. NVATA Workshop
37. Regional Citation
38. Ag Division Business Meetings
39. Nominations and Elections

The Agenda was then accepted as presented.

PUBLICITY

Dick Glass, Publicity Chairman, asked all to fill out the publicity release as found in their packet and either give them to him or turn them into NVATA Headquarters for mailing. Arrangements were made for pictures, both by state and Regions.

RESOLUTIONS

Richard Strangeway - Region VI Chairman of the Resolutions Committee, discussed the policy of the Resolutions Committee. Vice President Teal appointed Harry Karpiak of New York to help with the wording of the resolutions. There were as yet no printed copies of the resolution available but the resolution from New York concerning UPAE was read and also the one concerning the AVA structure change. These were discussed but no action was taken.

Teal then discussed the proposed NVATA constitution revision concerning the acceptance of teacher trainers and state supervisors as active members of NVATA with all rights except holding office.

NATIONAL FFA OFFICER

At this point President Glen McDowell presented National FFA officer Cliff Saylor of Arizona who extended greetings from the National FFA to NVATA.

STATE PRESIDENT'S PANEL

George Dunsmore reported on the State President's Panel. The title for the panel is "What Makes Your Organization Work." Connecticut, Pennsylvania, Virginia, and Maryland were the states that reported to George. New York and West Virginia said they would after this meeting.

IDEAS UNLIMITED

At this point Alternate V.P. Shadle reported on the Ideas Unlimited Contest. A copy of the contest was in each packet of material distributed. Entry deadline date is Sunday at 5:00 in the NVATA office.

AGRICULTURAL TEACHER'S DIRECTORY & HANDBOOK

Vice President Teal discussed all eleven points. The concensus of opinion was that $35,000 was too high and $20,000 was a more realistic amount for its purchase.

2017

STATE PRESIDENT'S REPORT

Connecticut - Roy Denniston, President, presented a written and verbal report.
Delaware -
Maine -
Maryland - David Miller, recipient of U. S. Steel Award winner reported verbally for State President Ralph McDonald. Junior high vo-ag was emphasized.
Massachusetts -
New Hampshire -
New Jersey -
New York - Richard Strangeway, President, presented a written and oral report.

NOMINATIONS

Vice President Teal opened the nominations for Vice President of Region VI.

Roy Denniston of Connecticut nominated George Dunsmore of Vermont. Lewis Ayers of Pennsylvania nominated James Shadle of Pennsylvania. Smeltz of Pennsylvania moved, seconded by Karpiak of New York that the nominations be closed. Motion passed.

After discussion for the term of office for Alternate Vice President Lewis Ayers moved, seconded by David Miller of Maryland, that the term of office for Alternate Vice President of Region VI be for one year. Motion passed.

Harry Karpiak nominated Richard Strangeway of New York as Alternate Vice President. This nomination was left open until after the election of the Vice President so that the loser could be nominated as Alternate Vice President.

Recess 5:10.

STATE REPORTS CONTINUED

Pennsylvania - Lewis Ayers, President, presented a written and oral report.
Rhode Island - Walter Waterman presented an oral report for his state.
Vermont - George Dunsmore, President, presented a written and oral report. He emphasized support committee and State Vocational Advisory Committee.
Virginia - D. D. Oliver, President, made a special thanks to the New York Association for their fine Region VI meeting at Castile, New York. The New York group said that a special thanks should go to Donald Robinson who took care of most of the arrangements.
West Virginia - Richard Glass, President, presented his states report. He commented on the State Teacher of the Year Award and the National Teacher of the Year Award. In 1972 they expect to start a Young Farmer Association.

USOE

Vice President Teal reported that this position is much improved and reasonably good.

ALTERNATE VICE PRESIDENT

Shadle reported on his activities since the meeting in New York. In addition to working with the State Association, he instructed the senior class in Agricultural Education at The Pennsylvania State University on all the professional organizations.

2018

REGIONAL VICE PRESIDENT

Teal presented a written report of his activities. A rising vote was given Teal in his support for NVATA President and his work in Region VI.

RESOLUTIONS

At this point Richard Strangeway read over the printed resolution for our information.

Lewis Ayers moved, seconded by Oakes that Region VI oppose moving our National office to Washington, D. C. Motion passed. If needed from the floor, Dunsmore, Oakes and Karpiak will speak for this resolution defeat.

REVIEW OF NVATA PROGRESS

Most of these items were covered in Castile. A special comment was made on citations. It is recommended that most of these be given at the Regional level. However, if they so merit, they could also receive one at the National level.

AVA RELATIONS

These are improved. The matter of direct membership is settled. Thanks go To Teal, Hilton, McDowell and Smith.

GEIGY

The Geigy Award score card will be changed.

ALUMNI ASSOCIATION

This was covered by Jay Benham yesterday.

REGIONAL NEWSLETTER

Recommended the sketches of state presidents be continued. Miller of Maryland discussed distribution of both newsletters. Possibility of bulk mailing to the states was discussed.

NATIONAL OFFICER VISIT

This was covered in previous discussion on policy.

NVATA WORKSHOP AND SITE SELECTIONS

Executive Committee will be holding workshop for state officers (Regional Leadership Conference) prior to state meetings. This almost seems impossible for this year in Region VI since a date and place from New Jersey is already committed. August 8-10 at Pennington, New Jersey.

CONSTITUTIONAL REVISIONS

There were no questions after reviewing these on the printed material. Passage of all was urged.

CONVENTION EVALUATION

These are to be written and turned into the new Vice President.

FFA CONTESTS

No additional information. Question arose as to who makes the final decision.

USES MADE OF DIRECTORY

1. Use to get teacher's aids (special tear out sheets).
2. Use book for list of state supervision.
3. Use to get names for list used in Master's thesis.
4. When going home from Convention, use to check on names to remember.

TORT LIABILITY INFORMATION
AVA now has coverage.

PROGRAM OF WORK
Will be revised.

APPRECIATION LIST
At least one person from each state should write in behalf of each state.

STATE PROBLEMS
Already covered in State Reports. Use of support committees will continue to grow in the Region.

ELECTIONS
Teal appointed Glass and Oliver as tellers.

James Shadle was elected Vice President of Region VI.

Denniston then nominated Dunsmore of Vermont for Alternate Vice President, seconded by Walterman of Maryland.

Karpiak moved, seconded by Paul, to close nominations. Motion passed.

George Dunsmore of Vermont was elected Alternate Vice President of Region VI.

MOTION
Strangeway moved, seconded by Karpiak, that Region VI go on record to thank Howard Teal of New York for the job he did as Vice President of Region VI and to pledge his full support as NVATA President. The same to go for James Shadle of Pennsylvania as Alternate Vice President of Region VI and now Vice President of Region VI and to George Dunsmore of Vermont as Alternate Vice President. Motion passed.

ADJOURNMENT
The meeting was adjourned by Vice President Teal.

Respectfully submitted,
JAMES S. SHADLE
Alternate Vice President
Region VI
Route #2
Hegins, Pennsylvania 17938

* * * * * *

REGION VI - REGISTRATION

CONNECTICUT

Roy T. Denniston - Lakeville

DELAWARE

None

MAINE

Peter Edgecomb - Limestone

MARYLAND

Clifford L. Nelson - College Park
Claud Marion - Princess Anne
David A. Miller - Gaithersburg
Loring T. Sparks - Parkton

MASSACHUSETTS

None

NEW HAMPSHIRE

W. H. Annis - Durham

NEW JERSEY

William G. Smith - East Brunswick

NEW YORK

George Couture - Nunda
Harry Karpiak - Greenwich
Stanley Oakes - Rexford
Richard Strangeway - Grahamsville
Howard Teal - Boonville

PENNSYLVANIA

Lewis C. Ayers - Akron
Doyle Paul - Berlin
James Shadle - Hegins
David P. McClay - State College
LeRoy Smeltz - Hegins
Wenrov Smith - Saltsburg

RHODE ISLAND

Raymond Northup - Providence
Donald E. McCreight - Providence
Walter Waterman - Johnston

VERMONT

Julian M. Carter - Montpelier
George Dunsmore - St. Albans

VIRGINIA

John R. Crunkilton - Blacksburg
Donald E. Elsm - Blacksburg
Benjamin Kissam - Chatham
A. H. Krebs - Blacksburg
D. D. Oliver - Abingdon
Boyd Roller - Strasburg
Bobby Wright - Blacksburg

WEST VIRGINIA

R. C. Butler - Morgantown
Richard Glass, Jr. - Masontown
Oscar J. Harris - Sandyville
Charles Jones - Huntington
Carl S. Thomas - Charleston

LADIES

Connecticut - 1
Delaware - 0
Maine - 0
Maryland - 2
Massachusetts-0
New Hampshire-0
New Jersey - 1
New York - 2
Pennsylvania- 3
Rhode Island- 1
Vermont - 1
Virginia - 2
West Virginia-1

2021

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APPENDIX
NVATA
CONVENTION
MINUTES

2022

PRESIDENT'S REPORT

After receiving the gavel in New Orleans, I stated my purpose would be to pursue and expand the moves to enhance the position and stature of Vocational Agriculture on the National, State and Local levels: recognizing, however, the progress made was dependent upon the extent and strength of actions in each of our six Regions, in each district, and by individual members.

It can be reported here and now that an over-all strong National position continues for Vocational Agriculture (now identified as Agri-business and Natural Resources Occupations in the U. S. Office of Education), and the FFA. Likewise, the NVATA has increased in status and stature, and throughout the Nation strong State associations have become stronger and others have awakened and are now on the move. These positives were made possible by the scores of leaders and organizations, some of long standing, within and outside our professional family who have given of their time, talents and monies to protect and advance our causes. The effect I may have had personally on the continuation of the forward moves and new thrusts will, of course, be determined by the NVATA membership, my judge and jury of concern.

Much remains to be done, however, if we are to realize our objectives. Continued effort and cooperation from the Executive Committee, State Associations, the AVA - Ag Ed Division and our friends in the Agricultural Complex, in government, and among the lay public are prerequisite to the achievement of this end.

This Convention is designed to cause us to take a brief look at where we have been, assess where we are now, and to explore future roads to travel. These I will discuss with you in my talk.

Thus, rather than submit a detailed close report of specific happenings - actions (some confrontations) during the past year, it is believed the following list of my activities and meetings attended, when coupled with the various reports of members of the Executive Committee and Executive Secretary, James Wall, will tell the 1971 NVATA story. It will be noted that many people and organizations have contributed to, cooperated with and supported the NVATA again during this year.

OFFICE ACTIVITIES

1. 339 letters written about business of the NVATA and/or letters of appreciation, w/numerous copies.
2. 4 memorandums with enclosures to members of the Executive Committee.
3. 3 memorandums RE: Situation U.S.O.E., with copies of letters enclosed to State Associations Presidents and Secretaries, NVATA Executive Committee, Head State Supervisors and selected individuals. *1
4. Developed in-depth "Recommended Guidelines - Criteria for Selecting Teachers of Vocational Agriculture for Honorary American Farmer Degree" (35 Criteria with divisions and points to be earned).
5. Edited "Suggested Changes and/or Additions to Proposal for a Professional Leadership Seminar at request of and for consideration of Executive

Secretary, James Wall.

6. Challenged AVA "Direct Dues" collection and secured clarification of procedure and intent of the AVA - RE: Collection of dues by mail.
7. With Executive Secretary, James Wall, set up Special Committees to "work" during Summer Executive Committee Meeting.
8. Developed Agenda items for Special Meeting (March 3) of officers of NVATA, AATEA and NASAE.
9. Developed, with James Wall, "Table of Contents" for NVATA officers Notebooks.
10. Set up "Kentucky Group" at request of AVA Executive Director, Lowell Burkett, to meet with Congressman Natcher and other members of the Congress, from Kentucky, RE: Appropriations for Vocational Education.
11. Revised, with assistance of William Smith (at request of Dr. Lloyd Briggs of the U.S.O.E.), Proposal for a Professional Leadership Seminar.
12. Edited NVATA President's Message for the Agriculture Teachers Directory and Handbook.
13. Challenged by "Questioning Letter" to U. S. Commissioner of Education certain alleged plans and/or happenings in the U.S.O.E. considered to be damaging to Vocational Education and moved, with assistance of Executive Secretary, James Wall, nationwide questioning of the Commissioner.
14. Appointed Dr. James Durkee to study and develop a NVATA position paper, with rationale, for having a U. S. Department of Education.
15. Requested in-put from all members of NVATA Executive Committee, William Smith and W. T. Black RE: NVATA Goals and Challenges for 1970-71 Year. Response received from all.
16. Appointed Wenroy Smith of Pennsylvania to represent NVATA at the H.E.W. Secretary's Regional Conference on Vocational Education in New York City on May 12 and May 13. Excellent report received from Wenroy on the Conference.
17. Served on and/or serving on following Special Committees:
    a. National Advisory Committee on planning Denver Seminar.
    b. National Program Development Task Force of AVA - AG ED Division for Agricultural Education.
    c. Continuing Consulting Committee on Transitions in Agricultural Education (follow through on Denver Seminar).
    d. Ad Hoc Advisory Committee for the FFA Magazine.
    e. AVA Task Force on Institutional Memberships.
18. Prepared article for American Vocational Journal, November 1971.
19. Edited Committee III, Transitions in Leadership Development Organizations for Youth", Denver Seminar, from original "rough draft" submitted as recorder.
20. Developed 25 word re: Memorandum of Understanding - BOAC, and 500 words on "What We (Vo-Ag Teachers) Can and Should Do With This" for publication by F. H. A.
21. Negotiated, in cooperation with Executive Secretary, James Wall, with Mr. and Mrs. T. L. Faulkner, RE: NVATA purchase of Agriculture Teachers Directory and Handbook. Counter proposal to Faulkners' offer developed and will be considered by NVATA Executive Committee at this Convention.
22. Developed a revised report on "Transitions in Leadership Development Organizations for Youth" from proceedings of National Advisory (Summation) Committee and original Committee III Report for consideration of Dr. Harold Byram, Denver Seminar Secretary, in development of the over-all Seminar Report. Copies distributed with cover memorandum to National FFA officers, Members of National FFA Board of Directors and Members of Advisory (Summation) Committee.

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23. Served as a judge to select the Star Agribusinessman of the FFA.
24. Gave some 16 greetings - talks in promotion of Vocational Agriculture and NVATA Goals at various meetings of professional organizations and other groups.

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*1 = Printed by and mailed from the National Office.

MEETINGS ATTENDED

*	December 18-19	KVATA Executive Meeting, Elizabethtown, Kentucky.
**	January 27-29	FFA Board of Directors (as observer), FFA Foundation Board of Trustees, Meeting with NVATA Past President, Millard Gundlach, and Agri-Business leaders, in Washington, D. C. and Alexandria, Virginia.
	February 11-12	National Livestock Feeders Convention, St. Louis, Mo.
*	February 18-19	National Advisory Committee to plan Denver Seminar on "Agricultural Education In Transition", in Chicago, Illinois.
**	March 3	Special Meeting of Officers of NVATA, AATEA and NASAE, in St. Louis, Missouri.
*	March 4-6	AVA-Ag Ed Division Policy and Planning Committee and AVA Spring Conference (Secondary Department), in St. Louis, Missouri.
	March 12	Proposed Consolidation of Education Legislation (Revenue Sharing) in Kansas City, Kansas (U.S.O.E. called meeting).
*	March 16	"Kentucky Group" meeting with Congressman Natcher, Congressman Perkins and Congressman Mazzoli - RE: Appropriations for Vocational Education, in Washington, D. C.
*	March 26-27	Vocational Teacher Education Institute, Oklahoma City, Oklahoma. (Teacher Education Assessment project).
	April 1-2	Program Development Task Force of AVA - Ag Ed Division, in Washington, D. C.
*	April 16	Spoke briefly at Semi-Annual Meeting of KVATA in Louisville, Kentucky.
*	April 16	Luncheon and Annual Meeting of Kentucky Vocational Association, in Louisville, Kentucky.
	May 11-14	National Seminar "Agricultural Education in Transition", in Denver, Colorado. Other meetings during days in Denver: (1) Program Development Task Force; (2) Special Meeting with NVATA (teacher) members in attendance; (3) Special Meeting(s) of NVATA Officers, Past Presidents, James Durkee and William Smith.
*	June 2-4	Kentucky Association of FFA Convention, in Louisville, Kentucky.
*	June 3	Special Meeting KVATA Executive Committee, Louisville, Kentucky.
*	June 8-11	Annual Conference Kentucky Vo-Ag Teachers and Annual KVATA Meetings, Hardinsburg, Kentucky. Spoke at Friday morning conference session.

	June 14-15	Annual Conference Tennessee Vo-Ag Teachers at Camp Clements, Sparta, Tennessee.
**	June 15-17	Workshop called by U.S.O.E. on Comprehensive Vocational Education Development and Utilization, Washington, D. C.
*	June 18	Ad Hoc Advisory Committee for the FFA Magazine in Alexandria, Virginia.
	June 21-22	Annual Conference West Virginia Vo-Ag Teachers at Ripley, West Virginia.
	June 23-24	Region IV NVATA Leadership Conference at Houghton Lake, Prudenville, Michigan.
	June 28-July 2	NVATA Executive Committee Meeting in Lincoln, Nebraska
	July 7-9	Annual Conference (Workshops) Minnesota Vo-Ag Teachers at Minneapolis, Minnesota.
*	July 12	Signing of Memorandum of Understanding RE:BOAC in Washington, D. C. for teachers of Vocational Agriculture with Clifford M. Hardin, U. S. Secretary of Agriculture; H. N. Hunsicker, National FFA Advisor; Dan Lehamn, National FFA President; and The Farmers Home Administration (James V. Smith, F.H.A. Administrator was ill and unable to be present). Also met with FFA President; FFA Executive Secretary, Paul Gray, and staff member Coleman Harris, re: Recommended amendments to FFA Constitution.
**	July 13-16	Annual Conference Wisconsin Vo-Ag Teachers, Madison, Wis.
	August 6-7	Region V, NVATA Summer Leadership Conference, Athens, Georgia.
	August 9-10	Region VI, NVATA Summer Leadership Conference, Letchworth State Park, Castile, New York.
	August 18-19	Annual Conference Indiana Vo-Ag Teachers, Indianapolis, Indiana.
*	August 20	Kentucky Vocational Association's Board of Directors Meeting, Lexington, Kentucky.
	August 30 September 3	National Advisory (Summation) Committee for Denver Seminar, on Agricultural Education in Transition, Washington, D. C.
	September 9-10	National Association County Agricultural Agents, Columbus, Ohio.
*	October 9-16	National FFA Board of Trustees and National FFA Convention, Kansas City, Missouri.
*	October 19	AVA Task Force on Institutional Memberships, Washington, D. C.
	October 26-27	Program Development Task Force for Agricultural Education (AVA - Ag Ed Division), Washington, D. C.
	November 5-6	National Association of State Departments of Agriculture, Miami, Florida.
	November 12-13	Planning - Finalization for NVATA Convention, Lincoln, Nebraska.
	December 1-8	NVATA Executive Committee Meeting(s) and NVATA-AVA Conventions, Portland, Oregon.

* AT NO EXPENSE TO NVATA
** PARTIAL EXPENSE TO NVATA

CONCLUSION

Serving as your President has been a priceless honor and an exciting challenge. Along the way I have gained and stored fond memories for my quiet times and the rewards I have received overshadow any contributions I may have made for the good of our Association.

Inspiration, assistance and understanding have come my way from many concerned and dedicated people during my tenure. May I here say a special thank you to the many members I have met and worked with in my NVATA travels; the Executive Committee, Jim and Georgia Wall; the Pike County Board of Education; my Superintendent, Tilden Deskins, and my Principal, John Lester; and, last but not least, my family.

Again, let me say this has been an exciting as well as a busy year, and my view for the future of our profession remains a positive one.

Respectfully submitted,
GLEN D. MCDOWELL
NVATA President
Box 252
Pikeville, Kentucky 41501

PAST PRESIDENT'S REPORT

The NVATA has had a productive year under the capable leadership of your President, Glen McDowell, and the Executive Committee. The voice of your organization is being heard by an ever-widening circle of people in influential positions in government and industry that can, most certainly, affect the future of Vocational Agriculture and the FFA.

We, as professionals, must do everything in our power to demonstrate the trust these people place in us is well founded. One of the surest ways to accomplish this is to be unceasing in our efforts to continually work to make our state associations strong, independent organizations. This is especially necessary for the future because the current legislation under which we operate delegates most of the authority for programs to the state level. Only with strong associations, can the grass-roots, the Teachers of Vocational Agriculture, have the inputs they need to make their contribution to the program in their state.

As state associations strengthen so the NVATA will strengthen because the NVATA is formed by the affiliation of the many associations nation-wide.

Certainly, we must continue to increase our efforts on local, state and national levels to continue Vocational Agriculture and the FFA as an effective educational program that is an integral part of the American economy.

This report concludes five years of service as a member of your NVATA Executive Committee. It is an honor to have the opportunity to say, "Thank You", to the many fine Executive Committee members it has been my pleasure to have served with and to the Officers and members of all the state associations. A special thanks to Jim and Georgia Wall for their dedicated service to the NVATA. As well as giving the service their position demands, they have been an inspiration to me in my efforts in your behalf.

Serving our great organization is an opportunity of a lifetime and the pinnacle of my career as a teacher of Vocational Agriculture. My service to you has provided many fond memories that I will always cherish.

MEETINGS ATTENDED

* December 19	Recognition banquet for Mr. Greiber, Wisconsin retiring Director of Vocational Education, Madison, Wisconsin.
* December 21	National FFA Alumni Association Council, Chicago.
* January 5	Wisconsin Vo-Ag, FFA Support Committee, Madison.
* January 22-23	WAVAI Executive Committee Meeting, Marshfield, Wisconsin.
** January 24-28	FFA and FFA Foundation Boards, Alexandria, Virginia.
** January 27	Met with representatives from Agri-Business on the future support to Vocational Agriculture, Washington, D. C.
** March 2-6	AVA Ag Ed Division Policy and Planning Committee, St. Louis, Missouri.
* March 10	National FFA Alumni Council, Chicago, Illinois.

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*	March 23	Conference with D. N. McDowell, Madison, Wisconsin.
*	March 25	Guest Speaker, Wisconsin State University-River Falls.
	March 31 - April 2	AVA Ag Ed Division Task Force Meeting, Washington, D.C.
*	April 16	Conference with Congressman Thomson, Fennimore, Wisconsin.
*	May 3	Conference with Congressman Steiger, Allenton, Wisconsin.
*	May 6-7	WAVAE Conference, Milwaukee, Wisconsin.
*	May 10-14	National Seminar on Agricultural Education, Denver, Colorado.
	May 22	Agriculture USA Program video-taping, Burbank, California.
*	May 26	Wisconsin Citizens' Committee on Vo-Ed, Madison.
	June 7-10	Wyoming Vo-Ag Summer Conference, Rock Springs.
*	June 17-18	Region III Summer Leadership Conference, Brookings, South Dakota.
	June 28 - July 2	NVATA Executive Committee Meeting, Lincoln, Nebraska.
*	July 11-16	Wisconsin Summer Conference, Madison.
	July 26-30	FFA Board of Directors, Alexandria, Virginia.
*	October 9-16	National FFA and Foundation Boards, Kansas City.
	October 25-26	AVA Ag Ed Task Force, Washington, D. C.
*	November 1	Guest Speaker, Wisconsin State University-Platteville.
	November 30-Dec. 3	AVA-NVATA Convention, Portland, Oregon.

*At no expense to the NVATA.

** Partial expense to the NVATA.

Respectfully submitted,
MILLARD GUNDLACH
Past President, NVATA
Box 55
Montfort, Wisconsin 53569

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EXECUTIVE SECRETARY'S REPORT

FOREWORD

The report which follows is for fiscal year 1970-71. By reporting on a fiscal year basis it is hoped that the permanent records of the Association will be more complete and meaningful. This procedure is the continuation of a policy started in 1958 when the present Executive Secretary assumed his position.

The report will include some important activities and accomplishments, certain recommendations, a list of meetings attended, materials distributed and other pertinent information.

The 1970-71 fiscal year has been one of challenge, success and disappointment. The main challenge faced by NVATA was that of regaining identification for Vocational Agriculture and the FFA by the USOE. Dr. Lee Hardwick was appointed as Associate Commissioner for Vocational Education and the NVATA-USOE Committee enjoyed an excellent working relationship with him. Dr. Hardwick reorganized the staffing pattern of the Vocational Division, identified Vocational Agriculture and the Youth Organizations and assigned two persons to work in the Agriculture Area.

Delegates attending the New Orleans Convention heard Dr. Hardwick speak and were favorably impressed with his philosophy of Vocational Education and his plans for upgrading and operating the program.

However, Vocational Educators in general and NVATA members in particular were disappointed to learn that Dr. Hardwick was to be moved, sometime in May, from his position as Associate Commissioner to some obscure position in the USOE.

Dr. Hardwick's departure does not necessarily mean that another reorganization will take place.

NVATA is meeting with some success in its efforts to have state associations form "support committees" for Vocational Agriculture and the FFA. A number of committees have been appointed and are already active. Several states are presently organizing committees.

A slight drop in membership for the second consecutive year is disappointing. However, most of the loss has occurred in 3 or 4 states where the program has been disrupted by those who have attempted to adjust it along lines recommended by the Washington bureaucrats.

With the many changes taking place in our system of education and with a tending to shift leadership and funding from the Federal to the State and Local levels, it becomes increasingly clear that teachers need to assume a much more active role in professional leadership.

ACTIVITIES AND ACCOMPLISHMENTS

....Sponsored a Careers Booth at the National FFA Convention for the 5th Consecutive year.

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Executive Secretary's Report - (continued)

.....Sponsored a "Coffee Hour" for trainees and a reception for Ag Teachers attending the FFA Convention.

.....Cooperated with Agricultural Industry in sponsoring contests that gave 15 members all-expense trips to the National Convention and one member a 10 day trip to Europe.

.....Past President Willard Gundlach was named as an Outstanding Teacher of Vocational Agriculture on the "Agriculture USA" program and flew to California to receive the Award and to make a tape that will be shown on National television.

.....A first was the invitation to teachers to participate in a national seminar called by the USOE. Over 40 teachers attended the seminar held in Denver and according to all reports made many excellent contributions. Glen McDowell, and Howard Teal served on the Seminar Planning Committee.

.....The NVATA President and Past President are serving on the National FFA Foundation Board of Trustees.

.....The NVATA President is an ex-officio member of the National FFA Board of Directors.

.....Four teachers of Vocational Agriculture are serving on the National FFA Judging Contest Committee.

.....Special notebooks were developed for members of the Executive Committee.

.....Ad-Hoc Committees of NVATA officers and members met on two occasions with Ford Motor Company personnel to review and make recommendations on a safety film being developed by the company.

.....For the first time NVATA was invited to participate in meetings called by H.E.W. - U.S.O.E.

.....NVATA was also asked by the USOE to serve on numerous FFA Committees that met in Washington and Kansas City.

RECOMMENDATIONS

.....Continue to urge state associations to organize state support committees for Vocational Agriculture and the FFA.

.....Continue the work of the NVATA-USOE Committee. Schedule a meeting with the new Commissioner at an early date.

.....Place more emphasis on having state associations name winners in each of the NVATA Awards Programs.

.....Extend efforts to keep the membership informed. The average member is quite far removed from his National Organization and many do not understand the purpose of their organization and the services it provides. Funds from dues are not adequate to make regular mailings to the entire membership. It would be helpful if in some way one or two mailings a year could be made to all members.

Executive Secretary's Report - (continued)

.....There is a need for all members and especially leaders of the state associations to become more concerned and more responsible.

.....Continue to urge State Associations to have active Public Information Committees that contribute materials on a regular basis to the Ag Division Public Information Committee.

.....Increase efforts to secure State Association and NVATA memberships and participation from the many post-secondary institutions. This area is one in which much work needs to be done.

.....Have a leadership training program for state association officers - National and/or Regional.

MEETINGS AND ACTIVITIES

	June 30 - July 3, 1970	NVATA Executive Committee Meeting, Lincoln, Neb.
	July 19 - 20	Ag Hall of Fame, Bonner Springs, Kansas
	August 2 - 5	American Institute of Cooperation, Columbus, Ohio.
	August 10 - 11	Region VI Leadership Conference, Morgantown, West Virginia.
	August 30 - 31	NVATA - USOE Committee, Washington, D. C.
*	September 7	Judged Beef and Dairy Showmanship, State Fair, Lincoln, Nebraska.
*	September 29	Spoke to Ag Ed Seniors, Lincoln, Nebraska.
	October 12 - 16	National FFA Convention, Kansas City, Missouri.
	November 30 - Dec. 10	National Convention, New Orleans, Louisiana.
	January 18 - 20	A. I. C. Committee, Denver, Colorado.
	January 28 - 29	National Safety Council, Chicago, Illinois.
	February 1	Ag Hall of Fame, Kansas City, Missouri.
*	February 6	District FFA Public Speaking Contest, Waverly, Nebraska - Judged this contest.
	March 2 - 6	Ag Division Policy Committee, St. Louis, Mo.
*	March 15	Spoke to Alpha Tau Alpha, Lincoln, Nebraska.
	April 23 - 25	Region I Leadership Conference, Boise, Idaho.
	May 11 - 14	National Seminar, Denver, Colorado.
	June 17 - 19	Region III Leadership Conference, Brookings, South Dakota.

* AT NO EXPENSE TO NVATA

Executive Secretary's Report - (continued)

OFFICE ACTIVITIES	1969-1970	1970-71
Pieces of mail sent for the Executive Secretary and President	18,126	24,265
Pieces of mail sent for the Vice Presidents	12,790	9,145
Total pieces of mail sent from the National Office	30,916	33,410
Pieces of mail received	3,146	3,272
Long distance calls made	60	47
Long distance calls received	131	157
Meetings attended	16	18
Days spent attending meetings	52	51
Information Bulletins distributed	2,520	2,650
Diaries.....distributed	977	1,051
Creeds.....distributed	3,858	2,952
Bylaws.....distributed	1,456	1,756

Following is a record of Newsletters edited by the Vice Presidents during the past 12 months which were printed and mailed by the National Office.

NEWSLETTERS	EDITIONS	AVERAGE	TOTAL COPIES
Region I	4	190	763
Region II	7	188	1314
Region III	8	175	1400
Region IV	8	181	1451
Region V	8	181	1451
Region VI	12	230	2768
Executive Secretary	12	1505	18060

News and Views of NVATA purchased by State Associations.

REGION	STATE	EDITIONS	NUMBER	TOTAL COPIES
I	Montana	12	70	840
II	Kansas	12	190	2280
III	South Dakota	12	75	900
III	Wisconsin	4	11	44
IV	Illinois	9	25	225
IV	Indiana	12	40	480
IV	Kentucky	12	30	360
V	Florida	12	265	2680
V	Georgia	12	10	120
VI	New Jersey	12	40	480
VI	Virginia	12	10	120

CONCLUSION

It should be crystal clear that NVATA must assume more leadership for the profession. Leadership at the National level has been so reduced and "ham-strung" by the Administration and the USOE that very little, if any, help can be expected from that source. Mr. Hunsicker and Mr. Gray are doing the best they can with limited help and resources available to them. Similar situations have developed in several states.

Executive Secretary's Report- (continued)

Vocational Agriculture Education and the FFA has many friends in positions of influence that are willing to assist in speaking up for the program. The NVATA and its affiliated associations needs to work closely with these people and encourage them to help in maintaining and improving the program that has served this nation so well for over 50 years.

Respectfully submitted,
JAMES WALL
Executive Secretary
Box 4498
Lincoln, Nebraska 68504

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REGION I

It has been an honor and pleasure for me to serve this past year, the last of my 3-year term as your Vice President. I would like to thank the other NVATA officers, State Officers, State Staffs and especially Jim and Georgia Wall for the help and encouragement during the past years.

Our Regional membership started to climb a little during the past year - through the good work of you in the State Associations, it will continue.

The Region I Leadership Conference was held in Boise, Idaho, April 23-24, with Kay Hult, Idaho President, as host. Eight States were in attendance. This was the best and most productive Regional Conference I have ever attended. We had a display of agriculture products which was saved for the Portland Convention.

I was able to attend State Association meetings in Montana, Oregon and Washington. All were outstanding with enthusiasm for our profession.

New Holland Award in the Region was won by Dan Birdsell of Deer Park, Washington, and the U. S. Steel Award by Ed Strong of Payette, Idaho.

A special thanks to my family and local administration for making the time available for me to serve you. I only hope the NVATA has received as much as I have.

ACTIVITIES FOR 1970-1971

*December 29-30	Meeting with Idaho Vocational Agriculture Teachers Executive Committee on formation of State Support Committee.
April 22-23-24	Region I Leadership Meeting, Boise, Idaho
June 6-7-8	Montana Vo-Ag Teachers Conference, Butte, Montana
*June 9-10-11	Idaho Vo-Ag Teachers Conference, Moscow, Idaho
June 15-16-17-18	Oregon Vocational Agr. Teachers' Conference, Medford, Oregon
June 28-29-30-July 1-2	NVATA Executive Meeting, Lincoln, Nebraska
July 27-30	Washington Vo-Ag Teachers Conference, Bellingham, Washington
*October 7-8	Idaho Vo-Ag Teachers Fall Conference, Boise
November 30-December 8	NVATA-AVA Convention, Portland, Oregon

*NO EXPENSE TO NVATA

Respectfully submitted,
FRED BECKMAN
Vice President, Region I
Box 30
Weiser, Idaho 83672

REGION II

At the conclusion of the first year as NVATA-Vice President for Region II, appreciation is expressed to the Executive Committee, Officers and Members of Region II and all others who have provided assistance and counsel in furthering the work of our organization. The cooperation received has contributed much to the activities within the Region and will result in increased activity in the years ahead. Let us all rededicate ourselves to working together for an even stronger National Vocational Agriculture Teachers' Association.

ACTIVITIES

Colorado, Kansas, Oklahoma, Louisiana, and Texas had entries in the U. S. Steel, Outstanding Young Member Award contest. Allen Nelson, Colorado Association was the Region Winner.

Colorado and Louisiana had entries in the New Holland, Career Orientation Award Contest, with Eugene Ruby, Colorado Association being the recipient.

Colorado, Kansas, Louisiana and Oklahoma had entries in the Geigy Professional Recognition Award for NVATA Members and Mel Adams, Colorado Association was the Region Winner.

Participation in "30 Minute Club" showed a good increase with a total of Forty-seven awards being made by state associations. Colorado 18 - Kansas 6 - Louisiana 8 - Oklahoma 7 - and Texas 8.

Colorado, Kansas and Oklahoma qualified for the NVATA Professional State Association Award.

Region II held a very successful Leadership Conference at Dodge City, Kansas with all seven states represented and a total of sixty-three NVATA members in attendance.

ACTIVITIES OF YOUR VICE PRESIDENT

	Edited Six Newsletters.
	Made 174 contacts by mail and phone concerning NVATA matters.
*March 16-18	South Central Member Relations Conference at Stillwater, Oklahoma. On discussion panel chaired by Dr. Walter Jacoby.
*March 29-31	Conference of Southern Region of Agriculture Workers at Oklahoma City, Oklahoma.
*May 11-13	National Seminar on Agriculture Education at Denver, Colorado.
June 1-4	Kansas Vocational Agriculture Teachers' Conference, Manhattan, Kansas
June 23-25	Region II Conference, Dodge City, Kansas
June 29-July 2	NVATA Executive Committee Meeting, Lincoln, Nebraska
August 3-5	Texas Vocational Agriculture Teachers' Conference, Dallas, Texas

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*August 8-10	Oklahoma Vocational Agriculture Teachers' Conference, Stillwater, Oklahoma
August 10-12	New Mexico Vocational Agriculture Teachers' Conference, Las Cruces, New Mexico
December 1-8	NVATA Executive Committee Meeting and NVATA AVA Convention, Portland, Oregon

* AT NO EXPENSE TO NVATA

Respectfully submitted,
BILL HARRISON
Vice President, Region II
Box 208
Leedey, Oklahoma 73654

REGION III

As Vice President of Region III I am happy for the opportunity to relay my thanks to the members of the Executive Committee and to the members of NVATA in Region III for making my duties much more enjoyable and rewarding. A special thanks to my good friend Jim Wall and his wife Georgia for their assistance, guidance and patience over the year. I felt that the work of the State Officers in Region III this past year was outstanding and feel that this demands special mention.

Alternate Vice President Grover Miehe is to be commended for a great year for output by the membership in "30 Minute Club" activities. With all six states in Region III submitting articles a grand total of 160 "30 Minute Club" certificates were distributed. A special thank you is due also to the men who took the time and prepared the articles, newsletters, etc. responsible for his receipt of the award.

South Dakota hosted the Summer Leadership Conference in Brookings, home of South Dakota State University. A fine turnout helped make the meeting a great success. A total of 72 NVATA members from Region III attended the conference. Much of the success for the Conference must go to Dr. H. W. Gadda, Teacher Trainer at SDSU and to Bob Pollman, President of the South Dakota Vo-Ag Teachers Association as a result of the great amount of leg work and many contacts that had to be made preparatory to the meeting. The presence of Executive Secretary Jim Wall, his wife Georgia and Past President of NVATA, Mick Gundlach added much to the impact of the conference. A thank you is definitely in order for these folks.

Not feeling that a good thing can be overdone I would like to again congratulate the officers in the Region with whom it was my pleasure to work with for the past year. I do not think that it would be possible to put together a more willing and capable set of men to work with--thank you fellows for making my job much easier. The newsletter writers in the Region did a real fine job in not only preparing a fine group of newsletters, but in making sure that the Vice President received each and every issue, this was greatly appreciated.

As your Vice President I wish to thank the State Associations of Nebraska and Iowa for their invitations to attend each of their State Conferences and for the wonderful hospitality shown me during my visits to their meetings. All of the states that I have visited the past two Summers have a special knack for making one feel very much at home.

The response to the Outstanding Young Educator and Career Orientation Award programs was very gratifying to this Vice President. All of the candidates were outstanding. Congratulations to the winners and also to those who did not win first as there was not a loser in this group of fine candidates.

ACTIVITIES OF THE VICE PRESIDENT - REGION III - January-December

*March	Attended two District Leadership Meetings and Contests. (FFA)
*April	State FFA Convention - SDVATA Meetings
June 18	Region III Leadership Conference, Brookings, South Dakota

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June 29-July 2	NVATA Executive Committee Meeting, Lincoln, Nebraska
July 14-15	Nebraska Summer Conference, Scottsbluff
August 9-10	Iowa Summer Conference, Des Moines, Iowa
*August 11-12	South Dakota Annual Conference, Huron
*October 6-8	South Dakota Education Association, Mitchell
October 11-14	National FFA Convention, Kansas City, Mo. (Work with the Career Booth)
November 30-December 8	NVATA Executive Committee Meeting and NVATA AVA Conventions, Portland, Oregon

Edited 10 Newsletters
Wrote approximately 121 letters and memos
Wrote several thank you letters
Wrote three Congressmen concerning the Washington situation
Processed the Professional Improvement segment of the Program of Work

*AT NO EXPENSE TO NVATA

Respectfully submitted,
FRANCIS N. MURPHY
Vice President, Region III
Box 46 - Route #3
Madison, South Dakota 27042

REGION IV

This has been a most exciting and rewarding year for me since my election as Region IV, NVATA Vice President.

My sincere thanks to the members of Region IV, President Glen McDowell, Jim and Georgia Wall, and the members of the NVATA Executive Committee for all of the help they have given me this year.

My thanks also go to my administration and the Marysville Board of Education for allowing me to pursue the duties of the NVATA.

ACTIVITIES OF THE VICE PRESIDENT - REGION IV

*April 3-4	Attended the OVATA Executive Committee and discussed the workings of the NVATA.
*April 19	Met Alternate Vice President, Jim Guilinger, in Plymouth, Indiana and planned the agenda for the Regional Summer Leadership Conference.
May 11-14	Attended the Denver Seminar, Agricultural Education in Transition.
*May 28	Attended an Ohio Vocational Education meeting in Dayton, Ohio.
June 9-11	Attended the Kentucky Vocational Agricultural Teachers Conference.
June 23-24	Conducted the Region IV Summer Leadership Conference at Prudenville, Michigan.
June 29-July 2	Attended the NVATA Summer Executive Meeting, Lincoln, Nebraska.
July 8-10	Attended the Ohio Vocational Agricultural Teachers Conference.
July 29-30	Attended the Michigan Vocational Agricultural Teachers Conference.
August 9-10	Attended the Illinois Vocational Agricultural Teachers Conference.
*October 12-15	Attended the National FFA Convention. Helped in the NVATA Booth and represented NVATA at the National Committee for Judging Contests.
October 24-25	Represented the NVATA at the National Safety Congress in Chicago, Illinois.
November 30-Dec. 8	Plan to attend the NVATA Executive Committee Meetings and the NVATA-AVA Convention, Portland, Oregon.

*AT NO EXPENSE TO NVATA.

Edited 9 Newsletters for a mailing list of 274.

Wrote 111 letters for NVATA concerns.

The Region had the following entries in the "30 Minute Club", The U. S. Steel Young Teacher Award Contest, and the New Holland Career Orientation Award Contest:

STATE	"30 MINUTE CLUB"	U. S. STEEL YOUNG TEACHER AWARD	NEW HOLLAND CAREER AWARD
Indiana	24	X	
Illinois	20	X	X
Kentucky	3	X	X
Michigan	4	X	X
Missouri	27	X	X
Ohio	14	X	X

The Region has three NVATA Life Members--Richard Barnes and Del Huber both of Michigan and Alternate Vice President Jim Guilinger of Illinois.

A special thanks to Alternate Vice President, Jim Guilinger, for his visits to four State Conferences: for the many letters he wrote in behalf of the NVATA; and for the way he promoted the "30 Minute Club" and other NVATA activities this year.

As my first year comes to a close as Vice President of Region IV, I fully realize how interesting and challenging it has been. Again, my sincere thanks to all who have helped me in any way.

Respectfully Submitted,
ODELL MILLER
Vice President, Region IV
Route #1
Raymond, Ohio 43067

REGION V

It doesn't seem possible that my second year as Vice President of Region V is coming up for evaluation. All states in this Region have suffered varied degrees of problems, but they are to be complimented for the way that they have faced and solved many of these problems. The partial solving and continued work upon these nation-wide problems have in my opinion strengthened NVATA in Region V.

Scheduling the last two States for March and June of 1972 completes my visitation to each Association. It has indeed been a gratifying experience to visit the states and observe the improved professional spirit and re-dedication and what they are doing for Vocational Agriculture. It is my belief that even though we have lost some memberships, we are stronger and a better organization maybe because of our nation-wide problems.

It has been a short, hard, busy and rewarding year. I want to extend appreciation to Glen McDowell and other NVATA officers; Jim and Georgia Wall, State Association Presidents, Alternate Vice Presidents Glenn Key, Jr., and W. D. Neil, Jr., and to all others who have helped me through this year.

CORRESPONDENCE

Eight issues of the Region V Newsletters were mailed to approximately 225 persons. Some 125 individual letters were written in the interest of NVATA.

REGIONAL LEADERSHIP CONFERENCE

Our last Leadership Conference, at least for a few years, was held in Athens, Georgia. Beginning in 1972 host states for this conference will rotate alphabetically beginning with Alabama.

THIRTY MINUTE CLUB

Fourteen "30 Minute Club" Certificates were awarded in Region V. More work needs to be done toward getting our accomplishments and programs before the public.

NVATA CONTESTS

Five states selected Outstanding Applicants for New Holland's Career Orientation Award. Guy Angel of Waynesville, North Carolina was selected Region V winner.

Four states selected an Outstanding Young Member to compete in U. S. Steel's Outstanding Young Member Contest. James R. Watson, Smithville, Tennessee was named the Region V winner.

Alabama, Georgia and Georgia Colored achieved 100% membership.

ACTIVITIES OF REGION V VICE PRESIDENT - 1971

*May 11-14	Denver Seminar - USOE
June 29-July 2	NVATA Executive Committee Meeting - Lincoln, Neb.
August 2-4	Florida Annual Conference, Miami, Florida

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August 6-7	Leadership Conference - Athens, Georgia.
August 12-13	North Carolina Annual Conference - Greensboro, N. C.
August 16-17	South Carolina Annual Conference - Rock Hill, S. C.
*August 18-19	Alabama Annual Conference - Birmingham, Alabama.
October 11-15	FFA Convention - Kansas City, Missouri.
*October 23	Alabama Executive Committee Meeting - Auburn, Alabama.
December 1-9	NVATA Convention - Portland, Oregon.

*NO EXPENSE TO NVATA.

A total of 35 days and 15,528 miles.

Respectfully submitted,
D. P. WHITTEN
Vice President, Region V
730 College Street
Centre, Alabama 35960

REGION VI REPORT

As the Portland Convention comes to an end, I complete the third year of my three year term as Vice President for Region VI. It has been a unique honor and privilege to serve Region VI and the NVATA as a whole in this capacity. I express sincere gratitude to those who selected me and to the great many others who gave me a large measure of support and cooperation throughout the entire term. I have exerted my best efforts to use this support and cooperation for the good of the NVATA. I can only hope that I have been able to give to the NVATA in some proportion to what it has given me.

I extend special appreciation to Glen McDowell and the other NVATA officers, Jim and Georgia Wall, State Association Presidents and Alternate Vice President, Jim Shadle.

CORRESPONDENCE

Twelve issues of the Region VI Newsletter were mailed to approximately 250 persons. About 150 individual letters were sent in the interest of NVATA.

REGIONAL LEADERSHIP CONFERENCE

New York did an excellent job in hosting our Regional Leadership conference at the Letchworth State Park. President McDowell was present for the entire conference and added much to the value of the conference. The registration was the largest in, at least, many years. Special thanks go to Bruce Hilton and the New York group for the excellent arrangements.

THIRTY MINUTE CLUB

Fifty-one "30 Minute Club" certificates were awarded in Region VI.

NVATA CONTESTS

Four states selected outstanding applicants for New Holland's Career Orientation Award. Oscar J. Harris, Sandyville, West Virginia was named Region VI winner. Eight states selected an Outstanding Young Member to compete in U. S. Steel's Young Member Contest. David A. Miller, Gaithersburg, Maryland was pronounced the winner for Region VI.

Donald Watson, North Syracuse, New York was judged to be the Regional winner in Geigy's Professional Member Contest.

OUTSTANDING STATE ASSOCIATIONS AWARD

This NVATA Award was achieved by New York, Pennsylvania, Vermont, Virginia and West Virginia.

100% MEMBERSHIP PLAQUES

Recognizing five years of continuous 100% membership, these awards go to Rhode Island and Virginia.

NEW FFA HORTICULTURE CONTEST

Region VI members were very much involved in securing and setting up a National FFA Horticulture Contest for future years.

MEETINGS ATTENDED

The Region VI Vice President attended the following meetings since the New Orleans Convention to represent the NVATA:

*	February 18-19	National Planning Committee for Denver Seminar, Chicago, Illinois.
	May 10-15	National Seminar for Agricultural Education, Denver, Colorado.
*	May 23-25	National Committee on Ornamental Horticulture Alexandria, Virginia.
	June 28-July 2	NVATA Executive Committee Meeting, Lincoln, Nebr.
	August 8-10	Regional Leadership Conference, Castile, New York.
	November 3-5	North Atlantic Regional Research Conference, Galillee, Rhode Island.
	November 30-Dec. 8	NVATA Executive Committee Meeting and NVATA-AVA Conventions - Portland, Oregon

Attendance at several State Association meetings was impossible due to conflict with the Mid-Year NVATA Executive Committee Meeting.

* At no expense to the NVATA.

Respectfully submitted,
HOWARD TEAL
Vice President, Region VI
Gorge Road
Boonville, New York 13309

NATIONAL VOCATIONAL AGRICULTURAL TEACHERS' ASSOCIATION
BUDGET - 1971 - 1972

Estimated Receipts:

0.	Transferred from Capital Reserves	$13,810.90
1.	Balance on hand	3,921.10
2.	Membership Dues	45,000.00
3.	Student Membership Dues	500.00
4.	Interest on Investments	3,000.00
5.	Miscellaneous Receipts	1,600.00
6.	TOTAL RECEIPTS	$67,832.00

Estimated Expenses:

1.	F.I.C.A. Taxes	920.00
2.	Retirement Fund	1,050.00
3.	Executive Secretary's Salary	17,500.00
4.	Office Secretary's Salary	5,900.00
5.	Additional Office Help	4,000.00
6.	Office Rent, Including Utilities	1,737.00
7.	Officers' Secretarial Service	500.00
8.	Postage	4,000.00
9.	Travel, Executive Secretary	2,500.00
10.	Telephone and Telegraph	800.00
11.	Office Equipment Purchase and Maintenance	1,250.00
12.	Public Relations	2,000.00
13.	U.S.O.E. Relations	1,500.00
14.	Consumable Supplies and Services	6,250.00
15.	Legal Services	225.00
16.	Alternate Vice President Expenses	900.00
17.	State, Regional, and Other Meetings	6,000.00
18.	AVA and NVATA Conventions	6,500.00
19.	Mid-Year Executive Committee Meeting	2,000.00
20.	Treasurers Office Expenses	1,000.00
21.	Presidents' Substitute Salary	1,000.00
22.	Miscellaneous Expenses	300.00
23.	Capital Reserve Investments	
24.	TOTAL ESTIMATED EXPENSES	$67,832.00

Respectfully submitted,
SAM STENZEL, TREASURER
Box 731
Colby, Kansas 67701

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MISCELLANEOUS REPORTS

NATIONAL SAFETY COUNCIL

The Farm Conference of the National Safety Council meets three times a year. One meeting is held in October in connection with the National Safety Congress while the other two are usually held in January and May. Your NVATA Representative attended the January meeting. Odell Miller, NVATA Vice President for Region IV, represented NVATA at the Safety Congress in October and his report follows this one.

Your NVATA representative serves as a member of the Awards and Recognition Committee. The Farm Conference is interested in all phases of farm safety and especially in rural youth safety. It sponsors various programs for youth and has provided safety programs for the FFA such as the Safe Corn Harvest Program, the Farm Power Safe Use Program, the Rural Highway Accident Prevention Program and the Safe Farm Shop Program. Many safety bulletins and materials are developed by the Farm Conference Staff which are made available to FFA Chapters. The conference also has available the services of staff members to assist local and state groups in planning safety programs.

A number of FFA boys attend the Safety Congress. Some are sponsored by interested local organizations or by their State FFA Association. It is pleasing to note the leadership ability of FFA boys attending the Congress.

It is felt by your representative that NVATA makes many valuable contacts with leaders in business, industry and education while working with and assisting with the Farm Conference in their many safety activities and he recommends continued cooperation with the Conference. For further information, write to - Mr. Phil Schmidt, Farm Department, National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60611.

Respectfully submitted,
JAMES WALL
NVATA Representative

NATIONAL SAFETY COUNCIL

Representing the NVATA, I attended the National Safety Congress, October 24, 25 1971 in Chicago, Illinois. During the conference, I attended the youth sessions especially the FFA meeting on Sunday night and the FFA breakfast on Monday morning.

Mr. William Paul Gray, National FFA Executive Secretary, was in charge of both meetings. There were 38 FFA members and eight advisors in attendance. The discussion was on, "How FFA Members Can Promote Safety in Their Chapters". Several of the Gold Emblem Chapters in Safety were represented and their members presented facts on what their chapters had done in safety.

Monday morning, October 25, I attended the annual meeting of the Safety Congress, the Farm Council Luncheon, and the Farm Council Meeting. It was most interes-

ting to see a number of people vitally interested in promoting farm safety.

It was indeed a pleasure to represent the NVATA at this inspiring conference.

Respectfully submitted,
ODELL MILLER
NVATA Representative

PROFESSIONAL PERSONNEL RECRUITMENT COMMITTEE

Members of the NVATA Executive Committee set up and operated a "Teach Vocational Agriculture" booth as a part of the Career Show during the National FFA Convention in Kansas City during October. Several other NVATA members and students in Agricultural Education from Kansas State University and Wisconsin State University assisted in operating the booth. Interest in the profession was high with FFA members. Approximately 2,000 brochures, "Opportunities in Teaching Vocational Agriculture" were distributed.

Respectfully submitted,
SAM STENZEL,
Member of The Committee

SOUTH CENTRAL MEMBER RELATIONS CONFERENCE

The South Central Member Relations Conference, sponsored by the Farmer Cooperative Service and the American Institute of Cooperation, was held at Oklahoma State University, Stillwater, Oklahoma, March 16-19, 1971. The theme of the conference was, "Members Growth-Cooperative Growth-A Team Approach".

Following a keynote address entitled "Where Do Members Get Information About Their Cooperative?" delivered by Dr. George Beel, Chairman Department of Sociology and Anthropology, Iowa State University, Ames, Iowa, a panel reacted with discussion on "What This Means To Us". The panel was chaired by Dr. Walter Jacoby, Director of Youth Education, American Institute of Cooperation, Washington, D. C. and your NVATA representative served as a panel participant.

A summation of the discussion and comments made by panel members concluded that "Total" Communication could be achieved only when there is complete participation by all people in any organizational structure. In the case of cooperatives that the lines of communication must be open between the Manager, Employees, Patron Members and the Board. Communication pays in General Planning and Decision Making.

It was a privilege to serve as NVATA representative at this conference.

Respectfully submitted,
BILL HARRISON
NVATA Representative

NATIONAL FFA CONVENTION

.....Your President, Executive Secretary, Treasurer, Past President and the Region III, IV and V Vice Presidents participated in the 1971 FFA Convention.

.....President McDowell received the Honorary American Farmer Degree. He also served as one of the judges to select the Star Farmer of America and was a busy man in many other ways.

.....The NVATA sponsored reception for Vo-Ag teachers and guests was especially well attended. Members throughout the Nation were able to mix in an informal and friendly atmosphere. Over 450 were in attendance.

.....Sam Stenzel is to be complimented for putting together a very interesting and eye catching exhibit for the NVATA Booth at the Career Show showing the need for Vo-Ag Teachers by states. The interest shown by many outstanding FFA members in teaching Vo-Ag bodes well for the future. The NVATA booth and the other Agriculture Career booths served a very useful purpose at the National FFA Convention.

.....Odell Miller served as a member of the National FFA Contest Committee. Three other teachers of Vocational Agriculture also served on the committee.

.....A reception and meeting was held for student teachers attending the convention with over 225 present.

.....President McDowell and Past President Gundlach met with the National FFA Foundation Board of Trustees. Gundlach also met with the National FFA Board of Directors.

Respectfully submitted,
JAMES WALL
Executive Secretary, NVATA
Box 4498
Lincoln, Nebraska 68504

NATIONAL FFA JUDGING CONTESTS

The Committee for the National FFA Judging Contests includes teachers, one of which is a member of the NVATA Executive Committee.

The committee met on Friday morning during the 1971 National FFA Convention. The following items were discussed:

1. The Board of Directors voted to extend Bulletin No. 4 to include the 1972 Contest rather than print a new Bulletin this year.

2. The Board of Directors voted to have contests in Farm Mechanics and Ornamental Horticulture provided sponsors can be found. The cost of each contest is about $8,000.00.

3. Dairy Products -- There was much discussion about the type of contest.

Finally, it was moved to expand the contest to include cheeses, milk, and ice cream. The scoring is to be on a positive means rather than the negative means now being used. This action cannot take place until 1973.

4. Dairy Cattle -- The group felt oral reasons should be left in the contest, and the cattle should be numbered left to right from the rear.

5. Livestock -- The group felt a class of feeder cattle should be dropped, and yield to be included with the grade.

6. Meat -- Because of the scarcity of lambs for judging, the group felt it advisable to drop lamb grades and replace it with a yield class of beef grading.

7. Poultry -- It was felt oral reasons do not add to the poultry contest, and since the broiler breeding class is impractical, it should be deleted.

It was a pleasure for me to serve on the Committee on National Judging Contests and to represent the NVATA.

Respectfully submitted,
ODELL MILLER, Vice President
Region IV - NVATA
NVATA Committee Member

NACTA CONVENTION

The Annual Convention of National Association of Colleges and Teachers of Agriculture was at Sterling, Colorado in June. The organization is dedicated to the improvement of college teaching of agriculture. The convention theme centered on "Teaching Agriculture in an Ecology Conscious World". It was well attended and many NVATA members were present. It was an outstanding professional convention.

Respectfully submitted,
SAM STENZEL, NVATA Treasurer
Box 731
Colby, Kansas 67701

AGRICULTURAL HALL OF FAME AND NATIONAL CENTER

Your representative has been a member of the Board of Governors of the Agricultural Hall of Fame since April 1, 1958 when the first meeting was called. He was named to the organization's executive committee on November 2, 1965, and was elected as Vice President in charge of Library Development on September 29, 1967, a position he still holds.

The Hall of Fame is being constructed on a 275 acre site located about 12 miles West of Kansas City. The site has been paid for, ground has been cleared and seeded and 2 buildings of the ten building complex have been completed and are open to the public. In addition to the buildings, there will be restorations of replicas of historical buildings and other out-door attractions such as a

country village and various crop and horticultural display plots.

For further information write to - Administrator, Agricultural Hall of Fame, 630 N. 126 Street, Bonner Springs, Kansas 66012.

Respectfully submitted,
JAMES WALL
NVATA Representative

AGRICULTURE USA

AGRICULTURE USA is a National TV program bringing information on the agriculture industry to thousands of viewers.

Mr. John Sterns, Director of the Program, was awarded the Distinguished Service Award by the National FFA at the 1971 Convention in Kansas City.

I was selected to represent the profession for the program's annual AGGIE Award program, filmed May 22, 1971.

Accepting the award as one of the nation's outstanding Vo-Ag teachers, was truly an honor and recognition of the outstanding service of 10,000 NVATA members nation-wide.

Respectfully submitted,
MILLARD GUNDLACH
Past President, NVATA
Montfort, Wisconsin 53569

AVA ADVISORY COUNCIL

The AVA Advisory Council usually meets twice during the AVA National Convention. Normally the meetings conflict with other NVATA committments and your representative is unable to attend. Under those circumstances, an alternate is asked to attend the meetings. Meeting dates have not been established at this time and it appears conflicting meetings will again be scheduled.

Respectfully submitted,
SAM STENZEL, Representative
Colby, Kansas 67701

AMERICAN INSTITUTE OF COOPERATION

Your NVATA representative is a member of the American Institute of Cooperation Youth Education Consulting Committee. Membership on this committee provides an opportunity to work with representatives of other groups and organizations in advising the AIC in regard to their youth activities.

During the past year, your representative met with the committee to help plan the Institute which was held at Fort Collins, Colorado.

Your NVATA representative urges all FFA Chapters to participate in Co-op contests at the state level and all State FFA Associations to submit entries for the National Contest.

For further information about the American Institute of Cooperation program for Chapters, contact your State Supervisor or write to - Dr. Walter Jacoby, Vice President, Programs, American Institute of Cooperation, 1129 - 20th Street, N. W., Washington, D. C. 20036.

Respectfully submitted,
JAMES WALL
NVATA Representative

THE NATIONAL FFA BOARD OF DIRECTORS

As the NVATA representative, I served as consultant and attended three meetings of the Board of Directors and National FFA Officers during 1971, January, July and October.

At each meeting, I was given the opportunity to express opinions on matters as they might apply to the NVATA or the local chapter of the FFA. All opinions expressed were given due consideration in the areas which they applied.

The position of consultant from the NVATA has been well received by the Board of Directors and the National FFA Officers and the opportunity for an equal position was extended to the AATEA at the July meeting. In compliance with Public Law 740, the positions of consultants from the NVATA and the AATEA does not have voting privileges.

Respectfully submitted,
MILLARD GUNDLACH
Past President, NVATA

ALPHA GAMMA RHO SCHOLARSHIP

In 1968, NVATA assumed responsibility for promoting and judging the Alpha Gamma Rho Scholarship Contest. Alpha Gamma Rho was ready to drop the program in 1967 when only one member applied for the $300 scholarship. In 1968 - twenty-one (21) states submitted applications, in 1969 applications were received from sixteen (16) states, in 1970 eleven (11) applications were received and in 1971 seventeen (17) applications were received.

Each State Supervisor is entitled to submit the application of one outstanding member. Application forms will be sent to State Supervisors at the proper time.

The 1971 winner of the $300 scholarship was - Darvl I. Swassink, Rural Route #2, Muscatine, Iowa 52761. First Alternate was Paul Albert Beckman, Box 30, Weiser, Idaho 83672. Second Alternate was Larry Ware, Route #1, Box 147, Attapulgus, Georgia 31715.

Entries were submitted by the following states: California, Idaho, Montana, Nevada, Oregon, Wyoming, Kansas, New Mexico, Iowa, Minnesota, South Dakota, Michigan, Ohio, Georgia (c), Massachusetts, New York and Pennsylvania.

Respectfully submitted,
JAMES WALL
NVATA Representative

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"THIRTY MINUTE CLUB"

Agricultural educators were quite active in contributing information to news and publication media in 1971. Twenty-six state associations submitted requests to the Regional Vice President for 316 "Thirty Minute Club" certificates.

REGION I	2 Associations	12 Certificates
REGION II	5 Associations	48 Certificates
REGION III	5 Associations	113 Certificates
REGION IV	6 Associations	94 Certificates
REGION V	1 Association	4 Certificates
REGION VI	7 Associations	45 Certificates
TOTAL	26 Associations	316 Certificates

Several of the recipients contributed more than one article. The 339 articles were published in the following types of media:

94	Agricultural Education Magazine
9	National Future Farmers Magazine
21	Other Professional Journals
185	State Association Publications
16	Agricultural Magazines and Publications
14	Other Publications
339	TOTAL

Associations utilized different means to identify the authors. Most designated a Publicity Chairman who kept the records. He then submitted the completed form to the Regional Vice President (in some Regions to the Alternate Vice President). The Vice President forwarded the certificates to the State Association President and the official record to the NVATA "Thirty Minute Club" Chairman for tabulation. Associations are encouraged to promote this activity to help "tell the Agricultural Education Story as it is".

Respectfully submitted,
SAM STENZEL, Chairman
Colby, Kansas 67701

NATIONAL ASSOCIATION OF COUNTY AGRICULTURAL AGENTS CONVENTION

The National Association of County Agricultural Agents again extended an invitation for your President to attend their Annual Convention and to bring Greetings from the NVATA.

The days of September 9-10 at Ohio State University in Columbus with County Agents from across the Nation were pleasant and informative. It pleases me to report that the NVATA and your President were received in a most cordial way and duly recognized. A spirit of cooperation was in evidence.

Mr. Larry Iverson of Valley City, North Dakota, President, NACAA is to be commended on the fine Convention he chaired, and the expertise and pleasing personality of the new President, D. W. Strobbehn of Atlanta, Georgia. I am looking forward to Doug's visit with us at our Portland Convention.

Respectfully submitted,
GLEN D. MCDOWELL
NVATA Representative

NVATA CONTESTS AND AWARDS

Following is a list of NVATA Contests and Awards with the names of the 1971 winners -

NVATA YOUNG MEMBER AWARD PROGRAM
UNITED STATES STEEL

Vocational Agricultural Education is continually faced with a shortage of qualified teachers. While college enrollment in Vocational Agriculture training programs has been increasing, unless those who have been trained enter and remain in the profession for a period of several years, the teacher shortage will continue.

As a means of encouraging young men to stay in the profession of teaching Vocational Agriculture and to encourage and recognize participation in the activities of The National Vocational Agriculture Teachers' Association, an awards program is being sponsored by United States Steel Corporation in cooperation with the NVATA.

The 1971 winners of trips to the National Convention for Outstanding Teachers from all Regions who have taught less than 5 years are -

REGION I	ED STRONG, 1131 North 11th Street, Payette, Idaho 83661
REGION II	ALLEN H. NELSON, Sunburst Trailer Park, Space B-5 Fort Morgan, Colorado 80701
REGION III	LEE G. MENDENHALL, High School, New Richland, Minn. 56072
REGION IV	GARY BAUER, 262 Orchard Lane, Sunbury, Ohio 43074
REGION V	JAMES WATSON, Box 7J, Evins Avenue, Smithville, Tenn. 37166
REGION VI	DAVID A. MILLER, 17022 King James Way, Apartment 102 Gaithersburg, Maryland 20760

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NEW HOLLAND NVATA CAREER ORIENTATION AWARD
SPERRY RAND DIVISION OF NEW HOLLAND

The NVATA Agricultural Career Orientation Awards program was conceived jointly by the NVATA Executive Committee and by New Holland to encourage vocational agriculture teachers to put continuing emphasis on informing rural youngsters about the opportunities in agri-business and to recognize teachers whose programs are especially worthy of note. The winners of these awards are not necessarily giants who conduct astounding feats of classroom derring-do. They are vocational agriculture teachers whose interest in their students and the future of American Agriculture has caused them to devise and conduct strong, innovative career orientation programs as part of the normal routines.

Winners of the Career Orientation Awards in 1971 are -

REGION I	DAN BIRDSELL, Box 728, Deer Park, Washington 99006
REGION II	EUGENE R. RUBY, 9400 East Hampden Avenue, Denver, Colorado 80231

2154

REGION III	DON C, LEIBELT, 381 Bader Street, Green Bay, Wisconsin 54302
REGION IV	GLENN H. GRIFFITH, 2770 Maxtown Road, Westerville, Ohio 43081
REGION V	GUY J. ANGEL, Route #3, Box 134, Waynesville North Carolina 38786
REGION VI	OSCAR J. HARRIS, Route #3, Box 41-1-A, Sandyville, West Virginia 25275

The above men will attend the National Convention with all expenses paid as winners of this award.

* * * * * * * *

GEIGY PROFESSIONAL AWARD FOR NVATA MEMBERS

Each year an outstanding teacher of Vocational Agriculture, who is a member of NVATA, is selected to make a 10 day, all expense-paid agricultural tour of Europe. The member selected joins representatives of several other organizations as guests of Geigy Agricultural Chemicals, Division of CIBA - Geigy Corporation, for the tour held in mid July.

Geigy provides certificates for all state winners and a trophy for the National winner.

Winners to date are --

.....1970 - MILLARD GUNDLACH, Box 55, Montfort, Wisconsin 53569

.....1971 - DONALD KABLER, Route #3, Box 398, Corvallis, Oregon 97330

* * * * * * * *

PFIZER AWARDS
CHAS. PFIZER & CO., INC.

The Charles Pfizer Company awards $500 checks to the Advisors of the Star Dairy, Livestock and Poultry Farmers.

The 1971 winners of these awards are -

Ed Fisher, High School, Hilmar, California 95324 - Dairy Farming

Jerry Sherwin, High School, Cuba City, Wisconsin 53807 - Poultry Farming

Roy Reno, High School, Riverton, Wyoming 82501 - Livestock Farming

* * * * * * * *

PROFESSIONAL STATE ASSOCIATION AWARD
NATIONAL VOCATIONAL AGRICULTURAL TEACHERS' ASSOCIATION

Your National Organization can be no stronger than its affiliated state associations. In order for a state association to be strong it must aggressively

engage in certain well-planned activities designed to serve the best interests of the members and the profession.

In order to encourage professional activities among the affiliated state associations, NVATA will present an engraved and framed certificate of appreciation to the President of each Association meeting five of these six items listed on the application form.

...1. Ninety-five to one-hundred percent (95%-100%) of the teachers of vocational agriculture were members of NVATA in 1971-72.
...2. New Officer List for 1972-73 was sent to the Executive Secretary within 10 days after election.
...3. Program of Work report forms for 1971-72 were sent to the Regional Vice President within 10 days after the State Association Convention.
...4. NVATA dues for 1971-72 were remitted to the Executive Secretary's office within 30 days following the state conference - (initial list) associations which do not have a conference shall remit their initial list and dues no later than October 1.
...5. Four or more issues of the State Association Newsletter for 1971-72 were provided to all members, the NVATA Regional Vice President and the Executive Secretary.
...6. A State Program of Work for 1971-72 was developed and distributed to all members and committees were organized to implement it.

The last complete fiscal year of the State Association shall govern the period of time for which the Award application is made.

The following Associations are 1971 winners of this Award:

REGION I

ARIZONA	DWAIN A. GALE - President
CALIFORNIA	EDWARD LEAL - President
MONTANA	DANIEL P. WATTS - President
OREGON	WRIGHT NOEL - President
UTAH	MARIO BUSSIO - President
WASHINGTON	JOHN MYER - President
WYOMING	OLIVER R. WILLE - President

REGION II

COLORADO	HERBERT LIGHTSEY - President
KANSAS	GARY JONES - President
OKLAHOMA	CLIFFORD CHRIST - President

REGION III

IOWA	GROVER C. MIEHE - President
MINNESOTA	JOHN MURRAY - President
NEBRASKA	MYRON R. SCHOCH - President
NORTH DAKOTA	HOWARD PEARSON - President
SOUTH DAKOTA	ROBERT POLLMAN - President
WISCONSIN	JAMES FERRIES - President

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REGION IV

ILLINOIS	CHARLES HARN - President
MICHIGAN	WILLIAM HARRISON - President
MISSOURI	JEFF BATTLES - President
OHIO	WARREN REED - President

REGION V

GEORGIA	JAMES C. ODOM - President
NORTH CAROLINA	JACK C. COLE - President
TENNESSEE	RALPH MOFFATT - President

REGION VI

NEW YORK	BRUCE HILTON - President
PENNSYLVANIA	LEROY SHELTZ - President
VERMONT	JOSEPH BUTTON - President
VIRGINIA	JOHN FREDERICK PARKER - President
WEST VIRGINIA	PAUL K. SILCOTT - President

* * * * * *

100% ASSOCIATION AWARDS

Two awards are available for State Associations attaining 100% of their potential membership - (1) Associations that have attained 100% membership for five (5) continuous years will receive a plaque. (2) Associations that attain 100% membership by November 1 of the current fiscal year will receive framed certificates.

The following associations have qualified for framed certificates:

MONTANA	CLARK CLEVELAND - President
*UTAH	BYRON MEMMOTT - President
*WYOMING	JIM WILSON - President

REGION I

* OKLAHOMA	JIM BOSTON - President
NEW MEXICO	DWIGHT HOUSTON - President

REGION II

* NORTH DAKOTA	CURTIS JENSEN - President
* SOUTH DAKOTA	PALMER EIDET - President

REGION III

*MISSOURI	LINVILLE HARDIN - President

REGION IV

* ALABAMA	JAMES MORRIS - President
* GEORGIA	T. C. WEAVER - President
* GEORGIA (c)	WILLIAM GEORGE - President

REGION V

*RHODE ISLAND	STEPHEN DELPOZZO - President
VERMONT	GEORGE DUNSMORE - President
*VIRGINIA	D. D. OLIVER - President

*Oualified for 5 Year Plaques

Respectfully submitted,
JAMES WALL
NVATA Representative

NATIONAL ASSOCIATION OF STATE DEPARTMENT OF AGRICULTURE CONVENTION

Your President was invited to attend the NASDA Annual Convention held in Miami Beach, Florida November 3-6 and was given a place on the program at one of the business sessions to make comments regarding NVATA activities and how they relate to NASDA. This invitation was accepted and the dates of November 5-6 set to attend the Convention.

NVATA involvement in this Convention is the beginning of a new and important relationship and our first move toward meeting the challenge -"let us know how we can better relate our activities and work together" made to me and Norman Bohmbauh, President Elect of the Minnesota VAIA by Don Wilkinson, Minnesota Commissioner of Agriculture. He gave this challenge to us when we visited with him at the "snacks" and Information Program Don and his staff had arranged at the Wisconsin Department of Agriculture for members of the W.V.A.I.A. at the Associations Annual Conference in Madison.

A thank you for involving the NVATA is extended to NASDA President, Doyle Conner.

Respectfully submitted,
GLEN D. MCDOWELL
NVATA Representative

NATIONAL LIVESTOCK FEEDERS ASSOCIATION CONVENTION

The NVATA was well received and pleasingly recognized when your President visited the NLFA Convention in St. Louis, on February 4-5, 1971.

While in attendance, numerous contacts were made with individuals, many of whom were representatives of strong agri-business firms as well as leading members of the NLFA. NFLA President, Gilbert Hadley and Executive Secretary, Don Magdanz were gracious hosts. These individuals were concerned with the future for Agricultural Education and the FFA. Strong support was expressed for our cause.

From this experience, early in my term of office, the high status and stature enjoyed by the NVATA among agricultural organizations was made more clear and further mandated that the NVATA cooperate with all agricultural organizations at every opportunity.

Respectfully submitted,
GLEN D. MCDOWELL
NVATA Representative

NATIONAL FFA FOUNDATION BOARD OF TRUSTEES

Millard Gundlach, Past NVATA President, and I represented the NVATA, local FFA Advisors as it were, on the National FFA Foundation Board of Trustees. The Board met in Alexandria, Virginia on January 27-28 and in Kansas City, Missouri on October 11.

The fine reception we received from members of the Board and the consideration given to the opinions we expressed were pleasing. Having two votes certainly has involved the NVATA in the actions and has also obligated the Association to strongly support the Board's Programs, including funding activities.

Important changes and forward moves have been made by the Board in administrative procedures, modification, expansion and funding of contests and awards programs during recent times. In order to fully appreciate the extent and value of these moves, one would have to review the minutes of meetings, in particular the ones held since Donald McDowell became Executive Director of the Foundation Sponsoring Committee.

Mr. John Streetman, Vice President of Allied Mills, Inc., was elected chairman of the Executive Council of the Foundation's Sponsoring Committee at the Sponsors October Meeting in Kansas City. He succeeds Mr. Fred Stines, Publisher of Successful Farming, who will remain on the Council as Past Chairman. Other elected members were: Malcolm McVie, 1st Vice Chairman and who is President of Elanco Products Company; and, Robert Walston, 2nd Vice Chairman and who is Vice President, Marketing - Funk Brothers Seed Company. L. W. Davis, of Allis Chalmers Company, retired Vice President, leaves the Council after years of dedicated service.

Congratulations and a thank you are in order for Mr. Stines. He and "his men" set a goal to raise $300,000 and passed that mark. In addition, among other firsts he **proposed** a new nation-wide "Blue Jackets" leadership program for youth through the FFA. Let Mr. Stines and the Sponsors in your state know you appreciate their efforts and get behind John Streetman and his team.

Respectfully submitted,
GLEN MCDOWELL
NVATA Representative

AVA TASK FORCE ON INSTITUTIONAL MEMBERSHIPS

The AVA invited the NVATA President to represent Vocational Teachers on the Task Force on Institutional Memberships. The group met in Washington, D. C. on October 19 along with the AVA President and staff members.

The Task Force's assignment was to project and/or develop:

1. Values to be derived by Institutions enrolled (services - loyalty).
2. Suggested kinds of memberships and dues.
3. Tentative guidelines (criteria) for such memberships.

It was agreed Institutional Memberships would be advantageous to the AVA and member Institutions as well and the Task Force recommended that the AVA Board of Directors make such available, which will require a change in the By-Laws.

The items listed above were also developed for consideration of the Board.

Present at the meeting were:

T. Carl Brown, AVA President, of Raleigh, North Carolina.

Task Force Members:

Dr. Byrl Shoemaker, State Director of Vocational-Technical Education for Ohio, of Columbus, Ohio.
Edwin J. Taibl, Dean, Technical Division, Milwaukee Technical College, Milwaukee, Wisconsin.
G. Herman Porter, Director, Division of Institutional Evaluation and Accreditation, State Board of Education, of Raleigh, North Carolina.
Glen D. McDowell, NVATA President and Teacher of Vocational Agriculture, the Johns Creek School, of Pikeville, Kentucky.

AVA Staff:

Lowell A. Burkett, Executive Director; Dean Griffin; "Dusty" Rhodes; John Hudson; and Mary Allen.

Respectfully submitted,
GLEN D. MCDOWELL
Task Force Member

AVA DEPARTMENTAL (SECONDARY)

The Committee met in St. Louis, Missouri the afternoon of March 5, 1971. The session was directed by Nina Keeton, Chairman and D. E. Coordinator of Little Rock, Arkansas. Nine members and four guests were present. The NVATA was represented by Glen McDowell, President.

Some of the Committee's suggestions and/or actions are as follows:

1. More members should be involved in the development and implementation of the Departmental Program of Work.
2. Improvements are needed in the Program of Work and more people should be involved (speaking and otherwise participating) in Departmental meetings at the AVA Convention. A concensus of opinion - more people want to be involved.
3. Faculties must be educated to Vocational Education, including teachers at grade levels K through post-secondary.
4. Wide and planned use should be made by Vocational Education of communications media (emphasis on TV) in telling others.
5. Specifics -- Portland Convention, Department Meeting(s):

...Recommended that David Brinkley, I.T.C. Co-ordinator be asked (invited) to give talk on Vocational Programs.
...Have a young man, successful in his field and having had Vocational Training, give a talk.
...Suggested theme: "Leadership and Development".
..."Reaction Panel" to be appointed from various disciplines, Jerry Greer, President of the Kentucky VATA to represent the NVATA.

...Joint session to be held with Post-Secondary Department during morning, Monday - December 6. Theme: "Reaching Others - Working with others".

...Evaluation instrument to be developed and used re: Department Program.

Evelyn Robenson (Mrs.), COE Coordinator of Westlake, Ohio was elected Program Chairman and Edith Myers (Mrs.), Home Economics Teacher of Stoneboro, Pennsylvania was elected Secretary. I volunteered to serve as the Portland Convention Proceedings Digest Recorder for the Department.

A matter of concern: Only 2 secondary Vocational teachers are currently serving on the Secondary Department Committee. Should not the AVA consider expanding the Committee membership to have at least one "grass roots" teacher from each discipline involved? This statement/question is not intended to any way to challenge or rule out any present non-teacher member of the Committee. Their service is, as I have observed it, needed and top rung.

Respectfully submitted,
GLEN D. MCDOWELL
NVATA Representative

PROGRAM OF WORK COMMITTEE REPORTS

MEMBERSHIP

Thirty-five State Associations submitted reports on the Membership section of the NVATA Program of Work. A summary of the response follows:

	YES	NO
1. Does your Association use a "package system" (includes only State VATA, State VA, NVATA, and AVA dues, all mandatory, none optional) of collecting dues?	31	4
2. Was your Association 100% in NVATA membership for the past fiscal year?	11	24
(a) Was your association recognized at the last National Convention for having 100% NVATA membership?	9	26
3. Were Agricultural Education trainees in your state informed about the NVATA by a member of your association?	32	3
(a) Did your association secure student NVATA memberships?	15	20
4. Did trainees from your state attend the NVATA reception for student teachers at the National FFA Convention?	22	13
5. Did Vo-Ag teachers from your state attend the reception for teachers at the National FFA Convention?	33	2
6. Did your association recommend anyone for Honorary NVATA Membership and/or the NVATA Distinguished Service Citation this year?	16	19
7. Did your association present NVATA years of service Keys to members during your Annual Conference?	30	5
8. Did your association present NVATA Years of Service and/or Outstanding Service Certificates to members during your Annual Conference?	28	7

The highest dues paid under the "package plan" was $51.00; the lowest was $24.50; the average amount for the 31 State Associations was $32.25. The average amount charged for State Association Vocational Agricultural Teachers' dues was $8.50; the highest was $16.00 and the lowest was $1.50. Three associations (Colorado, Illinois and Texas) assessed dues using a mill levy against annual salaries. Their lowest dues were $36.00 and the highest were $85.00. State Vocational Association dues ranged from a low assessment of 25¢ to a high of $21.00. The average dues were $5.07.

The reports indicated that a high percentage of the reporting State Associations presented Service Key and/or Service Certificate Awards. The report did not request the number of Service Keys given but the Associations reported 483 Service Certificate Presentations.

Respectfully submitted,
SAM STENZEL, Chairman
Box 731
Colby, Kansas 67701

TEACHER WELFARE

Thirty-five State Associations submitted reports on the Teacher Welfare Section of the NVATA Program of Work.

Fifteen Associations reported a recent study on teachers load. It seems most states have guidelines for upper limits on enrollment--about 60 day students was considered a full load.

Twenty-two associations reported sabbatical leaves available -- 17 with some salary and 5 with no salary.

Sick leave for most part is a state or district policy. However those with extended employment, 12 months, should consider receiving more days than the regular 9 month teacher.

All thirty-five associations reported some type of retirement benefits available.

FFA transportation was financed by teacher, chapter and school district and varied within states. It appeared from the reports where the school district financed travel the programs were more effective.

Openings for teaching positions were available from either the State Supervisor, placement service, employment service or Teacher Educators.

Twenty-eight (28) associations reported active teacher recruitment committees. Only 2/3 of the associations had any type of organized program for new members. This is an area needing to be worked on.

Salaries varied from $6,200 to $18,500. Arizona puts out a calendar of activities including their program of work. This makes it effective and usable.

Many new ideas were presented. They will be passed on to areas in the association for considerations.

My personal thanks to all who reported and may your state association benefit from your efforts.

Respectfully submitted,
FRED BECKMAN, Chairman
Box 30
Weiser, Idaho 83672

PROFESSIONAL IMPROVEMENT

Thirty-five states submitted reports of their activities in this section of the Program of Work.

A summary of these reports follows:

1. Twenty-two states reported conducting Exchange of Ideas Contests.
2. Three hundred ninety entries were received and recorded in the Exchange of Ideas Contest.

3. All twenty-two states reported giving prizes to the Exchange winners.
4. Twenty-nine states reported having companies or organizations furnishing scholarships to agriculture teachers seeking advanced training.
5. Some of the special problems studied during the year and reported at the National Convention were: Teacher recruitment, evaluation of the agriculture department, formation of Ag Support Committee on state wide level, communications of NVATA activities to all members on state level, state association help to beginning teachers, FFA Supply Service, State Advisory Committees, public relations.
6. Thirty-four states reported workshops and some sort of short courses as a form of in-service training. Some of the areas included in the courses were: Ag Mechanics, Farm Management, Agribusiness, Horticulture, welding, small engines, surveying, electricity, pastures, judging, range management, landscape, natural resources, concrete, wood working, water systems, cold metals, and masonry.
7. Thirty-one of the thirty-five states indicated that college credit was given for working on special problems when not in residence.
8. Only six states indicated that college credit was given for attendance at State Vo-Ag conferences.
9. Twenty-one states indicated that sabbatical leave was given for professional improvement.
10. Orientation of the new officers was carried out in several manners, namely; the work-up program through the ranks, work with retiring officers, incoming officers spend time on board of directors prior to election, joint staff meetings during conference, distribution of materials to new officers, executive committee meetings during August, October and January.
11. All thirty-five of the reporting states encouraged their members to subcribe to THE AG EDUCATION MAGAZINE.
12. Twenty-four states reported a committee to review professional materials.
13. Only ten of the states indicated making an effort to meet with the officers of the state school administrators association. Six states reported that their officers met with the officers of the state school administrators association.

It would seem that a number of states have made a real effort in the area of professional improvement as indicated by their reports. I wish to thank those states who reported for their time and effort in preparing the reports and as such making this summary more meaningful. I would like to encourage those states that did not, to make an effort to do so in the future.

Respectfully submitted,
FRANCIS N. MURPHY, Chairman
Box 46
Route #3
Madison, South Dakota 57042

2064

FFA RELATIONS

Thirty-four Associations submitted reports on FFA Relations.

Twenty-five states had considered revisions of National FFA Judging Contests.

Constructive ideas for improving National FFA Judging Contests:

7 states ---	Add National Agricultural Mechanics Contest
4 states ---	Add Horticulture Contest
2 states ---	Add Agronomy Contest
2 states ---	Add Farm Management Contest
2 states ---	Add Agri-business Contest
2 states ---	Do away with the Poultry Contest
12 states ---	Gave no ideas for improving

Constructive Ideas for Improving FFA Supply Service

7 states ---	Faster Service
3 states ---	Lower prices where they will be competitive
3 states ---	Make girls tailored jackets
2 states ---	Don't try to make money
5 states ---	It is improving
12 states ---	No comment

Twenty-one states participated in developing a code of ethics for FFA members.

Thirty-four states encouraged FFA Chapters to send free subscriptions of National FFA Magazine to businessmen.

Twenty-eight states encouraged local chapters to use official FFA calendar.

Twenty-eight state associations helped secure scholarships for FFA Members.

Thirty-four states urged proper use of the FFA jacket.

Twenty-nine states urged local chapters to observe Farm-City Week activities.

Thirty-one states recommended the use of FFA billboards during National FFA Week.

Respectfully submitted,
D. P. WHITTEN, Chairman
730 College Street
Centre, Alabama 35960

PUBLIC RELATIONS AND PUBLICITY

Thirty-five associations responded. They are as follows:

Region I	Region II	Region III
Arizona	Arkansas	Iowa
Montana	Colorado	Minnesota
Oregon	Kansas	Nebraska
Utah	Louisiana	South Dakota
Washington	Oklahoma	Wisconsin
Wyoming	Texas	
One not identified		

Region IV	Region V	Region VI
Illinois	Alabama	Connecticut
Indiana	Florida	New York
Kentucky	Georgia	Pennsylvania
Michigan	Mississippi	Vermont
Missouri	North Carolina	Virginia
Ohio	Tennessee	

Summary of the reports:

1. 88% of the reporting associations awarded 344 "Thirty Minute" Certificates.
2. 113 members had articles published in The Ag Ed Magazine.
3. 98 members had articles published in National professional publications.
4. 65 members had articles published in other National publications.
5. 97% of the associations sent out news releases for the last NVATA Convention.
   (a) 100% of the members attending the convention reported to their membership.
   (b) 100% of the members attending the convention prepared local news releases.
   (c) 74% had group pictures taken at the convention.
   (d) 63% released the group pictures to their local news media.
6. 91% of the associations reported publishing a state newsletter. The average number of issues was 5.3 per association. The greatest number of issues reported was 12, the lowest 2.
7. 94% of the associations made awards to groups and individuals for the contributions to Vocational Agriculture.

   166 Outstanding Service Awards
   332 Years of Service Keys awarded
   230 Years of Service Certificates awarded
   207 Teacher of Teachers Certificates awarded

8. 51% of the associations named an individual to be responsible for cooperating with the AVA Ag Ed Division Information Committee. 37 articles of information were sent to this committee.

Respectfully submitted,
MILLARD GUNDLACH, Chairman
Montfort, Wisconsin 53569

2066

COMMERCIAL RELATIONS

Thirty-five Associations submitted reports. A summarization of these is as follows:

1. Thirteen associations investigated the possibility of making farm equipment and machinery available to Vo-Ag departments on a rental or loan basis. Apparently this practice is decreasing.
2. Twenty-three associations cooperated with industry in an advisory capacity in the preparation of teaching aids.
3. Thirty-two associations indicated that a company representative attended their conferences.
4. Only nine associations were involved in trying to secure scholarship award programs for Vo-Ag instructors. Of these nine, seven were successful. The number of scholarships received per state varied from one to eleven with a value ranging from $100 to $1300.
5. All but one Association distributed the NVATA diary.
6. Twenty associations have State Advisory Councils. One additional association is organizing one.
7. Sixteen state associations have State Vo-Ag support committees. One additional state is organizing one. The use of state support committees appears to be increasing.
8. Thirty-three associations had an entrant in the U. S. Steel Young Member Contest.
9. Twenty-five associations had an entrant in the New Holland Career Orientation Contest. Considerable interest continues to be shown in both of these contests.
10. Twenty-two associations had workshops for teaching Agriculture Industry Occupations.
11. Even though no specific question was asked regarding Geigy's Professional Member Award, ten associations responded that they had an entrant. No doubt many more than this actually entered the contest.
12. Twenty associations gave awards to outstanding teachers, many of which were sponsored by commercial concerns. Examples of awards given include:
    a) Trip to National Convention
    b) Outstanding Vo-Ag Teacher Awards
    c) Agricultural Leadership Awards
    d) Distinguished service awards
    e) Public Relations Awards
    f) Special retirement Award
    g) 25 Year Plaque Award
    h) 30 Year Watch Award
    i) 35 Year Luggage Award

13. The following are examples of the major activities of state commercial relation committees:
    a) Setting up awards with commercial concerns
    b) Providing certificates for sale to teachers for local recognition
    c) Encourage tours of commercial concerns
    d) Securing ag radio men to educate teachers on ways and means of publicity
    e) Using commercial concerns in workshops
    f) Securing gifts of farm equipment

g) Operating instructional materials service
h) Completing list of resource people from Agri-business
i) Securing use of commercial concerns people for professional day
j) Obtaining discounts on cars and other items
k) Securing industry sponsoring of Vo-ag teacher calendar, State Vo-Ag Teachers Directory and State Vo-Ag Teachers Handbook
l) Obtaining support from industry and business for Vo-Ag funding
m) Starting State FFA Foundation

In final summary, it would appear that many Associations are continuing to work closely with commercial concerns to maintain and improve Vo-Ag programs and enhance the Vo-Ag Teaching Profession.

Respectfully submitted,
HOWARD TEAL, Chairman
Boonville, New York 13309

2068

AVA RELATIONS COMMITTEE

Annual Reports were received from thirty-five (35) States as follows:

Region I (-1 or 2)	Region II (-1)	Region III (-1)
Arizona	Arkansas	Iowa
?*	Colorado	Minnesota
Montana	Kansas	Nebraska
Oregon	Louisiana	South Dakota
Utah	Oklahoma	Wisconsin
Washington	Texas	
Wyoming		

Region IV (100%)	Region V (-3)	Region VI (-8)
Illinois	Alabama	Connecticut
Indiana	Florida	New York
Kentucky	Georgia	Pennsylvania
Michigan	Mississippi	Virginia
Missouri	North Carolina	Vermont
Ohio	Tennessee	

*1 - One report did not have name of state or person sending affixed.

Of the States Reporting:

.. 91% worked closely with their State Vocational Associations.
.. 48½% indicated that the State Vocational Association shared expenses of delegates to the NVATA-AVA Convention.
.. 88½% reported their State Vocational Association would have a full quota of delegates to the AVA House of Delegates at the Portland Convention.
.. 100% indicated that their Vo-Ag Association encouraged membership in the AVA.
.. 100% reported their delegates to the 1970 NVATA-AVA Convention (s) gave complete "Convention" reports to the membership.
.. 20% received financial help to attend the NVATA-AVA Convention from their State General Education Association.

General Comments/Selected from the Reports:

A. The reason given by the three states reporting they did not work closely with their state vocational association was (1) the Vocational Association is weak; or (2) one did not exist as such.
B. All but 3 of the 35 states gave "financial assistance for delegates" as one method used in promoting attendance at the NVATA-AVA Convention. Eight (8) reported using additional encouragements, ranging from publicity, paying expenses of one young teacher, and urging delegates to take wives.
C. Twelve (12) states reported receiving help from their state education association.
In addition to financial help in attending the NVATA-AVA Convention, as in the case of 7 states, these "helps" included: (a) Providing funds in varying degrees for departmental meeting at in-state conventions - publicity,

speakers, meeting room, etc. (One state reported receiving $500.00 and another $200.00.): allotments for publicity (news letters and other publications); and (c) legal advice.

D. Suggestions for improving AVA Services; activities and thrust of the NVATA and your State Ag Teachers Association were received from 19 states and are, or fall, into these categories:

(a) Legislation: More activity and communications needed on the part of the AVA in promoting and/or securing desirable legislation.

(b) Leadership and Activities: The AVA should take a more aggressive leadership and activities promoting role, including giving more attention to AVA Field Representatives and more support of the NVATA in the re-identification of Agricultural Education at the National level. And, both the NVATA and the AVA are asked to provide more assistance to their affiliated state associations.

(c) Publications - Communications: The AVA Journal should be made more readable and have more articles pertaining to Agricultural Education. Communications relative to legislation should be written in more "common terminology" and tell why when asking for support. Information to members through various printed media should be expanded with fewer from the AVA being devoted to insurance only and multi-copy mailings of newsletters, etc. should be made from the National level to district "section" chairmen or directors. One chairman suggested group purchase of a dicta-phone type or recorder for record keeping and turn over to new state officers.

(d) Cooperation - Unity: The AVA, as well as State Ag Teachers Association should work more closely with the NVATA and the Ag Ed Division of AVA. States should also inform members of NVATA and AVA services and involve members more actively on committees. Unity should be promoted among all Vocational disciplines and better coordination or effort through cooperation is needed at all levels.

One State Chairman gave this advice, to quote: "Get off dead center and get involved in making needed changes" and another suggested the formation of a Young Owls Club to promote interest in the NVATA, AVA, State VATA and State VA.

Respectfully submitted,
GLEN McDOWELL, Chairman
Box 252
Pikeville, Kentucky 41501

INFORMATION COMMITTEE

Following is a tabulation of the thirty-five Associations reporting to the NVATA:

1. Approximately two hundred ninety-two NVATA members, (teachers) from the Associations will attend the NVATA-AVA Convention.

2. One State Constitution was last revised in 1956; one in 1959; one in 1964; one in 1966; one in 1967; four in 1968; five in 1969; seven in 1970; and twelve in 1971.

3. Nineteen secretaries have served for one year; seven for 2 years; one for three years, one for four years; one for five years; one for seven years and one for ten years.

4. Nineteen state association secretary's have served for a period of more than one year.

5. Thirty Associations have written a Program of Work.

6. Thirty-one Associations publish a Newsletter.

7. Thirty-two Associations make the NVATA Information Bulletin available to all members. (Revised in 1967).

8. Thirty Associations have made the NVATA Bylaws which were revised in 1968 available to their members.

9. Thirty-four Associations use official stationery.

10. Thirty-four Associations stationery shows that they are affiliated with NVATA.

11. Twenty-five Associations stationery shows affiliation with the AVA.

12. Twenty-four Associations stationery shows affiliation with the State Vocational Association.

13. Thirty-three Associations use official NVATA pins, gavels, certificates and plaques in making service awards.

14. Twenty-eight Associations make use of the "Teacher of Teachers" Certificate.

15. Thirty-two Associations give the Creed of NVATA to all new members.

16. Twenty-one Associations make copies of the NVATA Student Membership Bulletin available to trainees.

Respectfully submitted,
JAMES WALL, Chairman
Box 4498
Lincoln, Nebraska 68504

AGRICULTURAL DIVISION OF AVA COMMITTEES

NATIONAL PROGRAM DEVELOPMENT TASK FORCE

In compliance with a resolution adopted by the Agricultural Education Division, AVA, in New Orleans, December, 1970, the following Program Development Task Force was appointed by C. M. Lawrence, President, Agricultural Education Division.

C. M. Lawrence, Chairman
Glenn McDowell, President, NVATA
Millard Gundlach, Past President, NVATA
Julian Carter, President, NASAE
J. A. Marshall, Representing NASAE
Gene M. Love, President, AATEA
Charles Drawbaugh, Past President, AATEA
L. Wesley Davis, Consultant, Allis Chalmers Company, Wauwatosa, Wisconsin
John E. Streetman, Allied Mills, Chicago, Illinois
Fred Stines, Publisher, Successful Farming, Des Moines, Iowa
Vernon Schneider, President, American Institute of Cooperation, Washington, D. C.
Stan Cath, Executive Secretary, National Association of State Directors of Agriculture, Washington, D. C.
C. Dana Bennett, Special Consultant, Foundation for American Agriculture, Washington, D. C.

CONSULTANTS

H. N. Hunsicker, U. S. Office of Education, Washington, D. C.
H. Dean Griffin, AVA, Washington, D. C.
Jim Wall, Executive Secretary, NVATA, Lincoln, Nebraska
Don McDowell, Executive Director, National FFA Foundation, Madison, Wis.

EXECUTIVE COMMITTEE

C. M. Lawrence	Glen McDowell	Julian Carter
Gene Love	Vernon Schneider	

The primary purpose of this task force is to develop and implement through the agricultural education professional organizations an effective instructional program for agri - business and renewable natural resources occupations.

The present specific needs of people in view of the continuing scientific, technical, economic, environmental and social changes taking place, require that a broad horizon, basic national program of education be developed and implemented in agri-business, leadership, citizenship and community development. Toward this end, the committee met three times to prepare for and implement the work of the Denver Seminar and serve in an advisory capacity to the AVA and the USOE.

Respectfully submitted,
GLEN MCDOWELL, NVATA President
MILLARD GUNDLACH, NVATA P. President

2072

AGRICULTURAL EDUCATION MAGAZINE

NVATA is represented on the Editing-Managing Board by - Glen McDowell, President; Odell Miller, Vice President for Region IV; Sam Stenzel, Treasurer; and, James Wall, Executive Secretary.

During the past year the secretary has had a column - "News and Views of NVATA" in several issues of the magazine. A number of pictures have also appeared.

The editor has made a special effort to secure articles from teachers of Vocational Agriculture and the Vice Presidents of NVATA have cooperated with him in contacting certain individuals in regard to preparing articles.

A meeting of the board will be held at the Portland Convention. Roy Dillon will become editor of the magazine on January 1, 1972. His address is - Roy Dillon, Teacher Educator, Agricultural Education, College of Agriculture, University of Nebraska, Lincoln, Nebraska 68503

Respectfully submitted,
JAMES WALL
NVATA Representative

PUBLIC INFORMATION

The Committee is composed of -

Alfred Krebs, Chairman	Virginia
James Wall	Nebraska
Dale Aebischer	Wisconsin
Harold Shoaf	Kansas
Paul Day	Minnesota
Oscar Loreen	Oregon
Don Reuvee	Washington, D. C.

Ex. Officio

Ralph Bender	Ohio
Lowery Davis	New Mexico
C. M. Lawrence	Florida
H. N. Hunsicker	Washington, D. C.
Mary Allen	Washington, D. C.
Alton Ice	Texas

The purpose of the committee is - "To provide leadership and coordination in securing, preparing, and disseminating information regarding agricultural education."

Some of the activities the committee proposes are:

1. The development and dissemination of booklets about various phases of the Vocational Agriculture Program.

2. The development and dissemination of short statements of facts about Vocational Agriculture programs.

3. The identification and distribution of statements about vocational agriculture made by well-known persons.

From time to time "Vo-Ag Facts" are sent to the states. States have been encouraged to name a Public Information Chairman who would cooperate with the National Chairman in both securing and distribution of facts.

The AVA Annually provides $1000 to the Committee for use in employing student help. The Chairman, Al Krebs, is in charge of the account.

Respectfully submitted,
JAMES WALL
NVATA Representative

MEMBERSHIP REPORT

REGION I	12-6-70	11-1-71
Arizona	67	76
California	261	1
Idaho	56	0
*Montana	60	60
Nevada	16	0
Oregon	99	91
*Utah	69	66
Washington	134	130
*Wyoming	52	47
TOTAL	814	471

REGION II		
Arkansas	222	207
Colorado	85	82
Kansas	167	186
Louisiana	197	218
*New Mexico	53	86
*Oklahoma	404	408
Texas	685	759
TOTAL	1813	1946

REGION III		
Iowa	276	277
Minnesota	439	466
Nebraska	150	170
*North Dakota	85	95
*South Dakota	63	71
Wisconsin	305	318
TOTAL	1318	1397

REGION IV		
Illinois	327	238
Indiana	235	211
Kentucky	210	205
Michigan	148	135
*Missouri	283	300
Ohio	452	471
TOTAL	1655	1560

REGION V	12-6-70	11-1-71
*Alabama	401	432
Florida	214	201
*Georgia	241	253
*Georgia (c)	104	94
Mississippi	130	117
Mississippi (c)	41	0
North Carolina	458	461
South Carolina	124	0
Tennessee	249	243
TOTAL	1962	1801

REGION VI		
Connecticut	26	14
Delaware	0	0
Maine	11	10
Maryland	38	42
Massachusetts	30	35
New Hampshire	8	0
New Jersey	8	19
New York	107	105
Pennsylvania	154	130
*Rhode Island	15	19
*Vermont	12	36
*Virginia	325	337
West Virginia	57	54
TOTAL	791	804

TOTAL ACTIVE	8358	7979
TOTAL STUDENT	368	441
FOREIGN	9	9
GRAND TOTAL	8735	8429

*DENOTES 100% - NOVEMBER 1, 1971

STUDENT MEMBERSHIP REPORT
November 1, 1971

REGION I	
Arizona - University of Arizona	20
Oregon	3
REGION II	
Arkansas - State	7
Colorado	32
Kansas - State	39
New Mexico	16
Texas - A & M - Tarleton	12
Texas - Nacogdoches	11
Texas - A & M - College Station	81
REGION III	
Minnesota - St. Paul	23
South Dakota - State	6
*Wisconsin - River Falls	26
REGION IV	
*Illinois - Normal	48
*Illinois - Urbana	13
Indiana - Purdue	24
*Kentucky - Lexington	6
REGION V	
Alabama - A & M	24
North Carolina - A & I	5
REGION VI	
Delaware	1
Maryland	1
New Hampshire	5
Pennsylvania - State	13
Vermont	7

TOTALS BY REGIONS

Region I	23
Region II	198
Region III	55
Region IV	109
Region V	29
Region VI	27
GRAND TOTAL	441

Professor Kennth James, Illinois State Normal, Normal Illinois is to be commended for having 100% Student membership in the NVATA for nine (9) consecutive years.

*DENOTES - 100% - NOVEMBER 1, 1971

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NATIONAL VOCATIONAL AGRICULTURAL TEACHERS' ASSOCIATION, INC.

STATEMENT OF ASSETS AND LIABILITIES
RESULTING FROM CASH TRANSACTIONS
June 30, 1971
(With comparative figures for the preceding year)

	June 30, 1971	June 30, 1970
Assets		
Cash in banks	$ 3,466	$15,872
Savings accounts	2,253	11,169
U. S. Treasury Notes,	-	10,000
Certificates of deposit, at cost		
First Savings and Loan Association of Sycamore	22,000	22,000
Farmers and Merchants State Bank	15,000	-
Colby Savings and Loan Association	5,000	-
Office equipment, at cost	8,690	7,401
Accumulated depreciation	(4,085)	(3,369)
Totals	52,324	63,073
Liabilities and Member's Equity		
Current Liabilities		
Payroll taxes payable	508	597
Retirement fund	480	-
Total Liabilities	988	597
Members' Equity		
Balance, beginning of year	62,476	70,059
Add		
Cash error beginning of year	141	-
Cash receipts	64,330	55,904
Net increase in investments	10,000	-
Equipment purchases	1,289	1,384
	138,236	127,347
Deduct		
Cash disbursements	85,793	64,121
Depreciation	716	578
Net increase in liabilities	391	172
	86,900	64,871
Total Members' Equity	51,336	62,476
Totals	$52,324	$63,073

This statement has been prepared from the books without audit verification.

2077

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
Year Ended June 30, 1971
(With comparative figures for the preceding year)

	June 30, 1971	June 30, 1970
Balance, beginning of year	$27,182	$35,258
Cash receipts		
Dues	46,433	47,932
Interest	2,277	3,748
U. S. Treasury Notes	10,000	-
Miscellaneous receipts	5,620	4,224
	64,330	55,904
Total Cash Available	91,512	91,162
Cash disbursements		
Taxes	962	1,258
Salaries	25,073	22,966
Office rent and maintenance	1,985	1,773
Postage	3,181	2,502
Executive Secretarial Expenses	2,372	2,322
Telephone and telegraph	863	660
Public Relations	2,747	3,701
Service supplies	4,722	4,808
Officer expenses	8,573	8,426
Convention expenses	6,182	7,803
Mid-year meeting	1,771	2,492
Miscellaneous	6,073	4,026
New equipment	1,289	1,384
Investments	20,000	-
	85,793	64,121
Balance, end of year	5,719	27,041
Represented by:		
Check accounts		
Thomas County National Bank, Colby, Kansas	3,466	10,000
Home State Bank, Russell, Kansas	-	5,872
Savings accounts		
Home State Bank, Russell, Kansas	-	10,000
Russell State Bank, Russell, Kansas	-	1,169
Colby Savings and Loan Association, Colby, Kansas	2,253	-
Totals	$ 5,719	$27,041

This statement has been prepared from the books without audit verification.

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AGENDA - EXECUTIVE COMMITTEE MEETING
PORTLAND HILTON HOTEL - STUDIO SUITE
December 1-2 & 7, 1971
Portland, Oregon

I. Call to order
II. Invocation
III. Communications, announcements, room changes, etc.
IV. Reports - Annual Report
    1. Officers
    2. Miscellaneous
    3. Program of Work
    4. Ag Division of AVA
    5. Membership
V. Acceptance of Agenda
VI. Old Business
    1. Ag Teachers Directory
    2. NVATA National Leadership Seminar
    3. 1971-72 Program of Work Report Form
    4. Newsletter to all members
    5. Revision of Bylaws
    6. Regional citation certificate
    7. Resumes - Honorary Life Members and Citations
    8. Officers notebooks
    9. Geigy Award
VII. Review of Convention Program and Plans
    1. Agricultural Education Division Policy Committee Meeting
    2. AVA Department meetings
    3. Ag Ed Editing and Managing Board meeting and dinner
    4. Agenda for Three General Sessions -
        (a) 1st General Session - 9:00-10:15 A. M.
        (b) 2nd General Session - 10:00-12:00 Noon
        (c) Final General Session - 9:15-10:45 A. M.
    5. Special Programs
        (1) Agricultural Education Division Special Program 1:30-2:30 P. M.
        (2) NVATA Special Program - 3:45-4:45 P. M.
    6. Regional Meeting plans - agendas - attendance forms - supplies
        (a) First Regional Meetings - 2:45-5:00 P. M.
        (b) Second Regional Meetings - 1:15 - 3:30 P. M.
    7. NVATA Reception
    8. Harvestore Breakfast
    9. State President's Dinner - Panel
    10. Co-Op Breakfast
    11. NVATA Past Officers Dinner and Meeting
    12. NVATA Awards Breakfast
    13. Publicity Committee - Pictures - I. D. Badges
    14. Resolutions Committee - Meeting Schedule - I. D. Badges
    15. Registration procedures
    16. Tickets
    17. Convention buttons
    18. Membership report - 5 year plaques - 100% certificates
        Life certificates - To be presented at the Harvestore Breakfast
    19. Professional State Association Awards - To be presented at the 2nd General Session

20. Ideas Unlimited - Judges - Awards to be presented at Awards Breakfast
21. Ag Ed standing committees
22. Certification of voting delegates - membership report - delegate cards
23. Hospitality
24. Vice Presidents checklist
25. Supplies for Regional Meetings
26. State Conference Dates - forms
27. Favors and Door Prizes
28. Attendance Ag Division Programs

VIII. New Business

1. AVA Vice President for Agriculture
2. AVA direct membership
3. AVA institutional membership
4. FFA Foundation contribution
5. Encyclopedia Brittanica
6. "Leadership for 10,000"
7. "Thirty Minute Club" certificates and rules
8. NVATA - USOE relations
9. NVATA - NASDA relations
10. Education News service
11. Position paper on FFA
12. BOAC program
13. Blue Coats for America
14. Regional coordinators FFA Foundation sponsoring committee
15. Task Force - Ag Ed Division
16. Silver Anniversary Convention - Atlanta, Georgia
17. Suggestions - Career Orientation Program
18. Use of FFA emblem
19. Newsletters - 1970-1971 report
20. Policy - State Association visits
21. Active NVATA membership
22. Leadership Training Program
23. AVA Bylaws amendment
24. Committee Reports

IX. Nominations

1. President
2. Treasurer

X. Final Executive Committee Meeting

1. Call to order
2. Appreciation certificates
3. Leadership conference dates
4. Next committee meeting
5. Review of Policies
6. Committee appointments
7. Ag Division nominating committee
8. Assistant Executive Secretary
9. Resolutions Committee procedures
10. Officer supplies
11. Adjournment

COMMENTS OF PRESIDENT GLEN McDOWELL
AT FIRST GENERAL SESSION IN

PORTLAND, OREGON
DECEMBER 4, 1971

At this moment, just a few hours past the clock time beginning of the first day of the rest of our lives, I want to begin my talk with you by saying I feel real good. May I share these feelings with you.

Last evening I was privileged to be a guest of our good friends, The U. S. Steel Corporation, at their dinner for the winners of the NVATA - U. S. Steel Outstanding Young Member Award and their wives. What these young teachers had to say, their attitudes and achievements as reflected (proved that is) by the successes of the students they have touched -- The affluent and academically strong as well as the socio-economically handicapped and the academically weak in both rural and urban situations, said to me that the NVATA has been correct in defending and promoting the expansion of programs in Vocational Education in Agriculture and the FFA. The successes scored by these young teachers and their students are possible everywhere U. S. A. And, just think present here at this moment are delegates representing state associations and some 9,000 teachers of Vocational Agriculture in every clime in our Nation. Many here have come great distances, some are present at great personal sacrifice in time and monies. Too, we are visiting and will be working together in a beautiful and hospitable city. And, perhaps my top feel good factor of all is the fact that the NVATA is in trouble. Any vigorous progressive organization today is involved in trouble and it has a future. A serene, complacent organization may successfully avoid troublesome endeavors and dodge issues, put its head in the sand and its plumed other end in the air as the ostrich does, but it is sure to have a low life expectancy and be of little service to human kind.

All of us here today, our fellow members at home and the lay public are indebted to the past leaders who designed and directed the NVATA toward being an association involved in trouble.

My challenge to you is to become deeply involved in our troublesome matters during this convention. Your expertise and strengths are needed now to chart tomorrows highways to be traveled by the NVATA. And, upon your return home, if this has not already been accomplished, work diligently to structure and direct your state association to defend and expand your state program in agricultural education and the FFA.

The present rule followed by the USOE, which leaves it almost entirely to a state to decide on the kinds of Vocational programs it will have as well as staffing, identities and funding mandates. I believe that state associations be structured and ready, when downgrading effecting our discipline occurs, to move to correct the situation.

When you have the opportunity, I am sure you will review carefully the President's report in the Annual Report and all other reports contained therein. Hopefully, this will provide you with a good background on the actions, thrusts and involvements of your NVATA - 1971.

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Your Vice Presidents are keyed to the problems we have, the issues to be considered and will work with you on these in your Regional Meetings.

Serving as your President has been a priceless honor and an exciting challenge. Along the way I have gained and stored fond memories for my quiet times and the rewards I have received overshadow any contributions I may have made for the good of our Association. Inspiration, assistance and understanding have come my way from many concerned and dedicated people during my tenure. May I here say a special thanks to the many members I have met and worked with in my NVATA travels, the Executive Committee, Jim and Georgia Wall, the Pike County Board of Education, my Superintendent, my Principal and last, but not least my family. Again, let me say this has been an exciting as well as busy year, and my future view of the profession remains a positive one.

Respectfully submitted,
GLEN D. McDOWELL
NVATA PRESIDENT
1970-1971
Box 252
Pikeville, Kentucky 41501

REPORT OF THE NVATA EXECUTIVE SECRETARY
NATIONAL CONVENTION, DECEMBER 5, 1971
PORTLAND, OREGON

President McDowell, members of the NVATA Executive Committee, members of the NVATA and guests: I am pleased to have the opportunity to speak to you this morning at the twenty-third Annual Convention of your great organization. For many of you this is your first NVATA Convention. However, I recognize many as having attended a number of conventions. This happens to be the 21st consecutive NVATA Convention that I have attended and the 17th as a member of the Executive Committee or as your Executive Secretary.

This is the first time that the NVATA has met in Portland and I am sure that for many of you this is your initial visit to this beautiful city. I know you will enjoy every moment of your stay here. The people of Portland and the whole state of Oregon have exerted every effort to make your visit a most pleasant and rewarding experience.

Before making other remarks, please allow me to express my sincere thanks and appreciation to the members of the Executive Committee, to the State Association Officers, to the State Supervisory and Teacher Education staffs, the membership at large and to all others who have cooperated so well with the NVATA Office during the past year.

Special thanks must go to President McDowell whose dedication and untiring efforts have been an inspiration to all who have been associated with him in the work of NVATA. One only needs to review his travel record for the past year to learn that he has been a very busy man. He has represented NVATA in an outstanding manner on many, many occasions and I have been told time and time again about the "good job" Glen McDowell was doing. And, believe me such favorable reports makes the work of your National Office much easier and more satisfying. In addition to his duties as National President, Glen has been a full-time teacher of Vocational

Agriculture. Thanks to an understanding Administrator and a cooperative Board of Education, he has been able to be away from his school 100 days during his term of office.

The Executive Secretary's report which appears in the Annual Report brochure shows some of the NVATA activities and accomplishments of the past fiscal year, lists meetings attended and covers some of the office activities. You have a copy of this report and may have already read it. If not, I would suggest that you do so because in the interest of saving time, it is not my intention to dwell at any length upon the contents of the report.

I would also like to point out to you that all of your National Officers have given much of their time and efforts during the past year to the work of the organization. An analysis of the records shows that the nine (9) National Officers spent a total of 393 days away from home and traveled 138,847 miles in carrying out their responsibilities. In addition the Executive Secretary traveled 10,500 miles during 39 days away from the office. This all adds up to a grand total of 432 days and 149,377 miles.

The Executive Secretary has traveled less this year than for several years. The primary reason is that the office work - load has increased to the point where one man can no longer manage it and be away from the office for many days out of the year. A secondary reason is that a recent heart attack made it necessary to forego several meetings that would have otherwise been attended.

As your Executive Secretary, it is my responsibility to report to you some of the accomplishments of the organization for the past year and to make certain recommendations for the year ahead. Here is what I believe are some of the major accomplishments:

.....Continued to work with people in the USOE in the interest of maintaining proper identification of Vocational Agriculture and the Future Farmers of America and at the same time to develop a blueprint for the new and emerging concepts of Vocational Agriculture. Certain members of the Executive Com-

mittee met and discussed the program with Dr. Marland and Dr. Worthington and others of the USOE Staff.

.....Developed, at the request of the National FFA Board of Directors, a new score card for selecting Honorary American Farmers.

.....Held 8 Regional Leadership Conferences with either the President, Executive Secretary or Treasurer in attendance.

.....Had two National Officers serve on the Planning Committee for the Denver Seminar. Five committee members and the Executive Secretary participated in the Seminar. Two NVATA members served on the committee to prepare the final draft.

.....Developed a notebook filing system for NVATA Officers.

.....Developed a position paper, with rationale for having a U. S. Department of Education.

.....NVATA continued to cooperate with Agricultural Industry in sponsoring contests that gave 15 members of NVATA all-expense trips to the National Convention.

.....NVATA sponsored a "Coffee Hour" for 225 trainees and a "Reception" for 500 Ag Teachers attending the National FFA Convention.

.....NVATA sponsored, for the fifth consecutive year, a "Careers Booth" at the National FFA Convention.

.....Donald Kabler, a past NVATA Vice President for Region I represented NVATA on an Agricultural Tour of Europe as a guest of Geigy Agricultural Chemical Company.

.....Developed a membership award program with certificates for Associations attaining 100% membership by November 1 and plaques for those with 5 years of continuous 100% membership.

.....Past President Millard Gundlach was named as an Outstanding Teacher of Vocational Agriculture on the Agriculture USA Program and flew to California

to receive the Award and make a tape that will be shown on National Television.

NOW FOR A LOOK TO THE FUTURE

Your organization, thanks to hundreds of dedicated individuals has made amazing progress through the years. Other groups and organizations within the education complex often look enviously upon you and wish that they could accomplish even half as much as the NVATA. While accomplishments have been many and success has been a delight, the time has arrived that you must make a decision at this convention that will have a far-reaching effect on the future of NVATA.

I, of course, am referring to the proposal to increase dues. NVATA dues were increased from $3.00 to $5.00 in 1967. You as well as I know what has happend to the value of the dollar today compared to 1967. NVATA simply can no longer maintain present services let alone provide new ones without additional revenue.

I believe nothing presents a clearer picture of the financial condition of an organization than does its assets which include cash in the bank, money in savings and bonds and personal property. With this in mind, auditors reports for the past several years were reviewed and this is what was found - In 1966, the year prior to the dues increase - assets stood at $34,000. In 1967, the first year the dues increase went into effect Assets increased to $50,000, in 1968 to $63,000 and in 1969 to $70,000. Then in 1970 they were down to $63,000 and at the end of fiscal 1970-1971 had decreased to $55,000.

The budget adopted for 1971-1972 calls for an expenditure of $19,000 in excess of expected income which could possibly reduce the net worth to around thirty-six thousand ($36,000). It is easy to see that at this rate the organization would soon be broke.

The dues situation for organizations is much like the tax situation. Prices for labor and materials increase and people ask for and demand additional services. The only possible solution is more taxes and in the case of the NVATA - higher dues.

It is hardly necessary to explain what would be done with additional money Some additional funds must be had to continue services at the present level and even more are needed if the organization is to move forward and provide additional services.

A $3.00 dues increase will raise approximately $27,000 in additional revenue. This amount will balance the budget and provide some reserve or permit expanded services.

Your paid NVATA staff consists of the Executive Secretary and 2 office secretaries. If services are to be added and the organization is to move forward additional help must be provided. I have already recommended to the Executive Committee that an Assistant Executive Secretary be employed at the earliest possible moment.

We have been fortunate this year that President Glen has been able to travel and assume many responsibilities for the organization. However, it is too much to expect every President to be away from his school so much of the time. Glen was away 109 days and traveled over 44,000 miles.

When the matter of a dues increase was discussed by the Committee serious consideration was given to asking for a $5.00 increase effective July 1, 1972. However, it was agreed that a $3.00 increase now with a $2.00 increase in 2 years would be more paltable and would be easier for you.- the State Association Leaders to sell to your membership.

The Executive Committee is also looking for revenue from other sources. Consideration is being given to purchasing the Agriculture Teachers' Directory. A final decision cannot be made on this matter until the outcome of the proposed dues increase is known, as purchase of the Directory would necessitate the addition of another member to the staff. This individual would probably devote 1/3 to 1/2 of his time on the work of the Directory and the remainder on providing additional services for the organization.

If you believe in NVATA, and I know you do, I urge you to vote for the proposed dues increase on Tuesday and then exert every possible effort to not only maintain but also to increase the membership in your state and national organizations.

NOW - I also recommend that the NVATA during the next year ---

....Continue to urge State Associations to have active Public Information Committees that contribute materials on a regular basis to the Ag Division Public Information Committee.

....Continue to urge State Associations to organize State Support Committees for Vocational Agriculture and the FFA.

....Increase efforts to secure State Association and NVATA memberships and participation from the many post-secondary institutions. This area is one in which much work needs to be done.

....Place more emphasis on having state associations name wwinners in each of the NVATA Awards Programs.

....Extend efforts to keep the membership informed. A Newsletter will be sent to all members following this convention. This will be the first time a direct mailing has been made to all members.

....We must have strong local programs of Vocational Agriculture. If every teacher of Vocational Agriculture will do a creditable job in his community, we need have no fear of losing the greatest education program this Country has ever known. Your state association must play a leading and vital role in developing and maintaining strong local programs.

In conclusion I must say that I am more optimistic about the future of Vocational Agriculture and the FFA than I have been in recent years. The challenge to provide better Vocational Education for greater numbers of people is being met. The public is becoming more aware of the need for and the value of good Vocational training.

The future lies in your hands.

Success will depend upon the leadership your state association is willing to give. If the lines of least resistance are taken and you wait for someone else to take the lead, I am just as sure as I am standing here today that the program in your state will probably suffer. On the other hand, if strong and aggressive leadership is displayed, I have little doubt that Vocational Agriculture and the FFA will assume an even more important and respected place in our educational system.

I sincerely hope that you will enjoy and profit from this convention and that you will return safely to your respective communities with a renewed enthusiasm for our great program of Vocational Agriculture and FFA. Thank you very much!

Respectfully submitted,
JAMES WALL, Executive Secretary
Box 4498
Lincoln, Nebraska 68504

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REPORT OF THE RESOLUTIONS COMMITTEE

Appreciation Resolutions.

WHEREAS, many organizations, commercial concerns, and individuals contributed considerable time, effort, and money in behalf of the NVATA and its members; and

WHEREAS, the success of the NVATA and its annual meeting depends on such efforts,

THEREFORE BE IT RESOLVED, that the NVATA express its sincere thanks to the following:

1. TO: Gordon Galbraith, Specialist, Agricultural Education, Oregon, for his excellent work as Program Chairman for the Agricultural Education Division.
2. TO: The AVA Staff and Board of Directors for their assistance and cooperation in planning and staging the NVATA Convention.
3. TO: The officers and members of the Region I Associations for the reception on Saturday, December 4, providing prizes and favors, and for the many other courtesies extended our group while attending the Convention. (In charge, Verlin Hermann, President, Oregon Association of Agriculture Teachers).
4. TO: Glen McDowell, NVATA President, and Teacher of Vocational Agriculture, Pikeville, Kentucky, for his outstanding leadership in successfully guiding our Association through 1970-1971.
5. TO: Fred Beckman, Weiser, Idaho and Howard Teal, Boonville, New York, retiring Vice Presidents, for their untiring efforts in behalf of NVATA and their respective Regions.
6. TO: The New Holland Division of Sperry Rand Corporation, New Holland, Pennsylvania and Dave Kramer, Assistant Communications Supervisor, for sponsoring the NVATA Career Orientation Award Program which brought six teachers to the Convention with all expenses paid.
7. TO: The Charles Pfizer Company, New York, New York and Robert Bennett, Assistant Public Relations Manager, Agricultural Division, for presenting $500 checks to the advisors of the National FFA Foundation Award winners in Livestock, Poultry and Dairy Farming.
8. TO: A. O. Smith Harvestore, Inc., Arlington Heights, Illinois and Bob Lyon, Manager, Marketing Information, for sponsoring the Breakfast on Sunday, December 5 for the Combined Agricultural Education Groups and their wives.
9. TO: United States Steel, Pittsburgh, Pennsylvania, and Charles Bourg, Manager, Agricultural Supplies-Marketing, for sponsoring the NVATA Young Member Award Program and paying the expenses of the winners from the six Regions to the Convention.
10. TO: The Farm Film Foundation and The Foundation for American Agriculture Hosts: Mrs. Edith T. Bennett, Executive Vice President, Farm Film Foundation, and C. Dana Bennett, Special Consultant, Foundation for American Agriculture and Farm Film Foundation, Washington, D. C. for sponsoring the NVATA Awards Breakfast on Tuesday, December 7.

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11. TO: The American Institute of Cooperation, Washington, D.C., Dr. Vernon Schneider, President and Dr. Walter Jacoby, Vice President, Programs, and The National Rural Electric Cooperative Association, Washington, D. C. and Art Mitchell, Supervisor of Youth and Young Adult Activities, for sponsoring the State Presidents Dinner on Sunday, December 5.
12. TO: The d-Con Company, New York, New York and Hamilton Hicks, Educational Director, for sponsoring the NVATA Diary and assisting the organization in many ways throughout the year.
13. TO: All members of the Executive Committee for their time and effort, in behalf of NVATA.
14. TO: James Wall, Executive Secretary of NVATA, Lincoln, Nebraska and the NVATA office staff, for their many efforts in behalf of the organization throughout the year and in particular during the convention.
15. TO: All persons serving as Hosts and Recorders and giving Invocations at NVATA sessions and meal functions.
16. TO: International Harvester Company, Chicago, Illinois for providing funds for Convention speakers.
17. TO: The Alternate Vice Presidents of NVATA who assisted with registration, served as secretaries for the Regional Meetings and as Judges for Ideas Unlimited Contest.
18. TO: The National Conference of State Cooperative Councils and National Cooperative Organizations and Chairman of the event, Mr. Oscar Hagg for sponsoring the breakfast on December 6 for the Agricultural Education Division members and wives.
19. TO: Dr. Robert Worthington, Associate Commissioner, Adult, Vocational and Technical Education, for his inspiring address on Saturday, December 4.
20. TO: Geigy Agricultural Chemicals and Richard Hansen, Publicist, Geigy Agricultural Chemicals, Ardsley, New York, for sponsoring the Professional Recognition Award for NVATA members.
21. TO: The Florida Department of Citrus represented by Hugh D. Lee, Carl P. Schuler and Al Wilson for providing the delicious fruits for delegates at the convention.

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SPECIAL APPRECIATION RESOLUTION: - NO. 1
DR. ROBERT WORTHINGTON

WHEREAS, Dr. Robert Worthington took time from his busy schedule to address the NVATA Special Program for the Agricultural Education Division, AVA at this convention, and,

WHEREAS, the remarks given were very inspirational and timely, and,

WHEREAS, his obvious dedication to the sound principles of Vocational Education was shown by his presentation,

THEREFORE BE IT RESOLVED, that we, the delegates of the 23rd Annual Convention of the NVATA, thank him and offer our support for the concept of Career Education as presented.

BE IT FURTHER RESOLVED, that copies of this resolution be sent to the Secretary of Health, Education and Welfare and The Commissioner of Education.

APPRECIATION RESOLUTION: NO. 2
AGRICULTURAL BUSINESS AND ORGANIZATIONS

WHEREAS, many members of Agricultural Business and Organizations have contributed their time and talent this past year to the AVA Agricultural Education Division National Program Development Task Force, and,

WHEREAS, this support has involved many hours freely contributed by these individuals.

THEREFORE BE IT RESOLVED, that the NVATA in Convention at Portland, Oregon convey its sincerest appreciation to the many individuals involved in this effort to develop and implement a National Program in Vocational Education, in Agriculture to be used as guidelines on the local, state and national level.

COMMITTEE RESOLUTIONS

NO. 1 - AVA AGRICULTURAL EDUCATION DIVISION NATIONAL PROGRAM DEVELOPMENT TASK FORCE

WHEREAS the primary purpose of this task force is to develop and implement through the Agricultural Education professional organizations an effective instructional program for Agri-business and renewable natural resources occupations, and

WHEREAS, they have developed a preliminary summation of the results of the seminar held in Denver on transition in Agricultural Education.

WHEREAS, this summation will be presented to the Ag Division for evaluation at this convention.

THEREFORE, BE IT RESOLVED that the NVATA go on record as being in favor of the further activities of this task force.

BE IT FURTHER RESOLVED, that the NVATA President and Executive Committee be empowered to appoint special committees as needed to adequately guide the profession during this transition period.

NO. 2 - NATIONAL FFA ALUMNI ASSOCIATION

WHEREAS, the authorization for the formation of the National FFA Alumni Association has been granted by the National Board of Directors of FFA.

WHEREAS, this is an association devoted to strengthening the FFA, promoting a greater knowledge of the agricultural industry and supporting education in agriculture.

THEREFORE, BE IT RESOLVED that the FFA Alumni Association council develop a specific program of activities for the association.

BE IT FUPTHER RESOLVED THAT NVATA members encourage the active support of this association.

NO. 3 - TORT LIABILITY INSURANCE

WHEREAS, for several years the NVATA has requested the AVA to secure sufficient insurance for Tort Liability, and,

WHEREAS in 1971 this insurance coverage for tort liability was obtained and made available to members of AVA.

THEREFORE BE IT RESOLVED that NVATA express appreciation to AVA for securing this insurance for vocational educators.

BE IT FUPTHER RESOLVED, that a copy of this resolution be forwarded to AVA Executive Director.

NO. 1 - NVATA OFFICE RE-LOCATION

WHEREAS, it is becoming more evident that improved lines of communication are necessary between the U. S. Office of Education and The National Vocational Agriculture Teachers' Association, and

WHEREAS, major decisions and actions are being made in Washington, D. C.

WHEREAS, due to the location of The NVATA Office it is often difficult to maintain top level communication between The NVATA Executive Committee and The USOE and U. S. Legislators.

THEREFORE, BE IT RESOLVED, that the NVATA go on record supporting a re-location of the NVATA office to Washington, D. C.

BE IT FURTHER RESOLVED, that the NVATA Executive Committee make every effort to plan and affect this move at the earliest possible date.

NO. 2 - ESTABLISHMENT OF THE BUREAU OF OCCUPATIONAL EDUCATION

WHEREAS, occupational education is an important vehicle for progress of mankind, and

WHEREAS, human resources of the Nation are not fully realized; and

WHEREAS, in order for the role of occupational education to function properly, more status and a greater share of the administrative organization is necessary; and

WHEREAS, the proposed occupational education act of 1971 sets forth the establishment of a Bureau of Occupational Education; and

WHEREAS, the Bureau would be headed by a qualified person with the rank of Deputy Commissioner;

THEREFORE BE IT RESOLVED, that the NVATA support the proposed establishment of the Bureau of Occupational Education as described in the Occupational Education Act of 1971 House Bill H. R. 7248, and

BE IT FURTHER RESOLVED, that the concept of the Governor designating an agency to administer occupational education be changed as follows: "Any State desiring to participate in the programs authorized by this Act shall in accordance with State law designate the State Board created by State law to administer the Vocational Education Amendments of 1968 (Public Law 90-576).

NO. 3 - VETERANS' FARM TRAINING

WHEREAS, Public Law 90-631 provides for a program of cooperative farm training for veterans, and:

WHEREAS, this course requires twelve hours of classroom instruction per week for 44 weeks per year, and:

WHEREAS, the act provides for no on-farm instruction, and:

WHEREAS, enrollees must be engaged in some type of farming activity to be eligible for enrollment, and;

WHEREAS, the rigid requirements of the act make it difficult for enrollees to meet the hourly classroom requirements;

WHEREAS, the proposed House Bill H. R. 3351 sets forth more workable requirements;

BE IT FURTHER RESOLVED, that the National Vocational Agriculture Teachers' Association support House Bill H. R. 3351 to amend section 1682 of title 38 of the United States Code, to provide 200 hours of organized classroom instruction and 100 hours of individual instruction per year per veteran.

BE IT FURTHER RESOLVED that the NVATA request AVA to support this Legislature.

NO. 4 - NVATA OFFICER VISITS TO STATE ASSOCIATIONS

WHEREAS, the NVATA has been declining in membership; and

WHEREAS, in several State Associations, the Vo-Ag teachers are employed on less than a year around contract;

WHEREAS, some state associations are becoming less effective because of an apparent lack of leadership at the state level:

THEREFORE BE IT RESOLVED, that the NVATA provide the necessary financial resources so that all NVATA officers can visit State Vo-Ag teacher associations periodically to assist the State Associations with any problems it may have and bring all issues and concerns of the association to its membership.

NO. 5 - TEACHER TRAINING IN AGRICULTURE EDUCATION

WHEREAS: the recruitment of promising young teachers in agriculture education is a priority function to insure the continuing success of vocational agriculture;

and WHEREAS; it appears that the teachers accepting jobs in agriculture education fell short of the nation's needs in 1971, as it has in the past twenty years;

and WHEREAS; it appears that the affiliated organizations of NVATA must maintain an active recruitment program for promising young teachers in agriculture education;

and WHEREAS; vocational agriculture teacher training institutions in the respective states have maintained efficient professional programs in agriculture education since their inception;

and WHEREAS: a president of a teacher training institution in Region IV has recommended in a report to the university faculty and as stated will recommend to the administration and Board of Regents that Agriculture teacher training programs be phased out;

and THEREFORE BE IT RESOLVED; that the NVATA, a professional organization composed of six Regions--50 states--opposes the recommendation of phasing out Agriculture Education in teacher training institutions until a thorough study of total needs can be made. This recommendation presented at a regular convened session of the NVATA held December 7, 1971, Portland, Oregon;

and BE IT FURTHER RESOLVED; that copies of this resolution be transmitted to the University and Board of Regents in the state involved.

NO. 6 - SUPPORT OF UNITED STATES DEPARTMENT OF AGRICULTURE

WHEREAS the USDA in the past has contributed greatly in the growth and effectiveness of the American Agricultural industry.

WHEREAS the USDA is a most important vehicle for maintaining American Agriculture as the most efficient food and fiber producing industry in the world;

WHEREAS there have been recent attempts to de-emphasize the key roll of the USDA in the continued strength of American Agriculture;

BE IT RESOLVED that the NVATA members furnish key legislators the necessary information to make them aware of certain moves to downgrade the important role of the USDA and to encourage them to take the necessary steps to prevent this action.

NO. 7 - NATIONAL FFA JUDGING CONTEST

WHEREAS; the majority of the National FFA contest rules committee is composed of people not in contact with students;

WHEREAS; the current operation of the contests often causes dissatisfaction among advisors and students;

THEREFORE BE IT RESOLVED; that the majority of the National FFA Contest Rules Committee be composed of High School FFA Advisors.

SPECIAL PROGRAM - CAREER ORIENTATION PANEL

Sunday, December 5, 1971

Portland Hilton Hotel
The Galleria

The meeting was called to order at 3:45 P. M. By Glen McDowell, NVATA President.

Mr. McDowell made the following introductions: -

Invocation - Keith Griffin, State President and Teacher of Vocational Agriculture, Montague, Michigan.

Host - Eugene Forrester, State President and Teacher of Vocational Agriculture, Ellenburg, Washington.

Recorder - Leighman Martin, State President and Teacher of Vocational Agriculture, Provencal, Louisiana.

Moderator - Dr. Walter Jacoby, Vice President, Programs, The American Institute of Cooperation, Washington, D. C.

Dr. Jacoby introduced the 6 panel members, all who were Regional Winners in the "NVATA Career Orientation" contest sponsored by the New Holland Division of Sperry Rand Corporation. They were:

Region I	-	Dan Birdsell, Deer Park, Washington
Region II	-	Eugene Ruby, Denver, Colorado
Region III	-	Don Leibelt, Green Bay, Wisconsin
Region IV	-	Glen Griffith, Westerville, Ohio
Region V	-	Guy Angel, Waynesville, North Carolina
Region VI	-	Oscar Harris, Sandyville, West Virginia

The panel members discussed among themselves their local programs in "Career Orientation" and then responded to questions from the audience.

The meeting was adjourned promptly at 4:45 P. M.

Respectfully submitted,
JAMES WALL
Executive Secretary

* * * * * * * * *

- NVATA RECEPTION -

Saturday, December 4, 1971

Portland Hilton Hotel
Ballroom A

The NVATA Reception for the Ag Division was sponsored by the Associations of Region I with Verlin Hermann, State President of the Oregon Association in Charge.

The reception was held from 5:00 - 6:00 P. M. with approximately 600 guests attending. Punch, coffee, cookies, sandwiches and many other delicacies were served. Guests were entertained by a group of Indian dancers.

Respectfully submitted,
JAMES WALL
Executive Secretary

10th ANNUAL HARVESTORE BREAKFAST

Sunday, December 5, 1971 — Portland Hilton Hotel, Ballroom A

The breakfast which was sponsored by A. O. Smith Harvestore Products, Inc., Arlington Heights, Illinois was attended by 521 members of the Ag Division, their wives and guests.

Glen McDowell, NVATA President and Master of Ceremonies made introductions as follows:

Invocation - Richard Strangeway, State President and Teacher of Vocational Agriculture, Grahamsville, New York.

NVATA Co-Host- Marlin Wacholz, State President and Teacher of Vocational Agriculture, Renville, Minnesota.

NVATA Co-Host- Jim Wilson, State President and Teacher of Vocational Agriculture, Glendo, Wyoming.

Recorder - Paul Dixon, State President and Teacher of Vocational Agriculture, Calhoun, Tennessee.

Sponsor Representative - Robert Lyon, Assistant To The Director of Marketing - A. O. Smith Harvestore Products, Inc. Mr. Lyon extended greetings to the group.

GREETINGS FROM THE FFA

Clifford Saylor, National FFA Vice President, Glendale, Arizona extended greetings on behalf of the FFA and spoke to the group for approximately 8 minutes.

MEMBERSHIP REPORT - (See Appendix pages 54-55)

The membership report for NVATA was given by Sam Stenzel, NVATA Treasurer. The report showed a gain in membership compared to the same date in 1970.

100% ASSOCIATIONS

Framed certificates were presented to the presidents of state associations attaining 100% membership for 1971-1972 by November 1, of 1971 as follows:

REGION I
- Utah
- Montana
- Wyoming

REGION II
- Oklahoma
- New Mexico

REGION III
- North Dakota
- South Dakota

REGION IV
- Missouri

REGION V
- Alabama
- Georgia
- Georgia (c)

REGION VI
- Rhode Island
- Vermont
- Virginia

FIVE YEAR - 100% PLAQUES

Engraved plaques were presented to state associations who had maintained 100% membership for 5 consecutive years (1966-67 to 1970-71) as follows:

REGION I
Utah
Wyoming

REGION II
Oklahoma

REGION III
North Dakota
South Dakota

REGION IV
Missouri

REGION V
Alabama
Georgia
Georgia (c)

REGION VI
Rhode Island
Virginia

LIFE MEMBERSHIP

The following were recognized for buying Life Memberships in NVATA: -

REGION IV
Jim Guilinger of Illinois
Charles Harn of Illinois
Lowell Fillen of Illinois
Cedric Gowler of Illinois
Eldon Witt of Illinois
Eldon Aupperle of Illinois
Richard Barnes of Michigan
Adelbert Huber of Michigan
Stanley Knopf of Michigan

REGION VI
Peter Edgecomb of Maine

Respectfully submitted,
JAMES WALL
Executive Secretary

* * * * * * * *

STATE PRESIDENTS DINNER

Sunday, December 5, 1971

Portland Hilton Hotel
International Club

The dinner was co-sponsored by The American Institute of Cooperation, with Walter Jacoby - Vice President, Programs as Host and The National Rural Electric Cooperative Association with Arthur Mitchell - Supervisor of Youth and Young Adult Activities as Host.

Total attendance including current and past NVATA officers and alt. V.P. currently holding office was 110.

INVOCATION

The Invocation was given by Kenneth Brashaber, State President and Teacher of Vocational Agriculture, Rushville, Indiana.

INTRODUCTIONS

President Glen McDowell made introductions as follows: -

NVATA Host - Robert Phillips, State President and Teacher of Vocational Agriculture, London, Ohio.

Recorder - Fred Faulks, State President and teacher of Vocational agriculture, Parma, Idaho.

Vernon Schneider-President of The American Institute of Cooperation, Washington, D. C.

PANEL DISCUSSION

A representative from each of the Regions participated on a panel discussion on - "Why It Works". The panel members explained why certain activities "worked" for their association. Francis Murphy NVATA Vice President for Region III served as panel moderator.

Regional representatives on the panel were -

Region I	Clark Cleveland of Montana
Region II	Les Olsen of Kansas
Region III	Marlin Wacholz of Minnesota
Region IV	Kenneth Brashaber of Indiana
Region V	T. C. Weaver of Georgia
Region VI	George Dunsmore of Vermont

ENTERTAINMENT

Entertainment was provided by the "Joy Boys" - Walter Jacoby and Arthur Mitchell - the co-hosts. It was more or less a concensus of opinion that while the "Joy Boys" were not pros, they were funnier than some that claim to be.

SPECIAL CITATION

A special citation was presented to Arthur Mitchell by Glen McDowell in recognition of his many contributions to the NVATA and the program of Vocational Agriculture.

The program was concluded at 9:25 P. M.

Respectfully submitted,
JAMES WALL
Executive Secretary

* * * * * * * *

CO-OP BREAKFAST

Monday, December 6, 1971 — Portland Hilton Hotel, Ballroom A

The breakfast was sponsored by the National Conference of State Cooperative Councils and National Cooperative Organizations.

- PROGRAM -

Master of Ceremonies - Oscar Hagg, Secretary, Agricultural Cooperative Council, Corvallis, Oregon.

Invocation - Lewis C. Ayers, State President and Teacher of Vocational Agriculture, Ephrata, Pennsylvania.

WELCOME - Wayne Daggett - President, Agricultural Cooperative Council, Portland, Oregon.

Introductions --

Verlin Hermann, President, Oregon Association of Vocational Agriculture Teachers - recorder.
Vern Schneider, President of AIC, Washington, D. C.

Neville Hunsicker, USOE, Washington, D. C.

Dean Griffin, AVA Staff, Washington, D. C.

Cliff Saylor, National FFA Vice President from Arizona

Walter Jacoby, Vice President, Programs, AIC, Washington, D. C.

James Wall, Executive Secretary, NVATA, Lincoln, Nebraska

Lowell, Hillen, - President and Teacher of Vocational Agriculture, Illinois - Host.
David Flint, State President and Teacher of Vocational Agriculture, Iowa - Host.

PARTNERSHIP AWARDS

Vernon Schneider, AIC President presented plaques to -

Glen McDowell, Kentucky, President of NVATA.
Gene Love, Missouri, President of AATEA.
Julian Carter, Vermont, President of NASAE.

RESPONSE

Gene Love, Missouri, President of AATEA, thanked the sponsoring organizations for the breakfast and for the many other contributions made by cooperatives through the years to Vocational Agriculture and the FFA.

Respectfully submitted,
JAMES WALL
Executive Secretary

* * * * * * * *

NVATA PAST OFFICERS DINNER AND MEETING

Monday December 6, 1971

Portland Hilton Hotel
Pavilion Room

INVOCATION

The Invocation was given by D. P. Whitten, NVATA Vice President for Region V, Centre, Alabama.

CALL TO ORDER

After 6:00 P. M. dinner the meeting was called to order by President Luther Hardin of Searcy, Arkansas.

INTRODUCTIONS

Each past and current officer was asked by President Hardin to stand, introduce themselves and tell when he served, offices he held and current employment.

MINUTES

The minutes of the last meeting, held in New Orleans, Louisiana, December 7, 1970 were approved as printed and read by James Wall, secretary.

LETTERS FROM PAST OFFICERS

James Wall, secretary, read letters he had received from past officers who were unable to attend.

Region I
Lionel Cross, California
Alfred Hansen, California
LeRoy Bunnell, Tremonton, Utah

Region II
W. T. Black, Pioneer, Louisiana
A. C. Hale, Camden, Arkansas
Tom Devin, Dumas, Texas

Region III
James Hamilton, Council Bluffs, Iowa

Region IV
W. S. Weaver, Delphi, Indiana
Walter Bomeli, Bangor, Michigan
Max Lampo, Neosho, Missouri

Region V
Elvin Walker, Tifton, Georgia
Travis Hendren, Raleigh, North Carolina
Floyd Johnson, York, South Carolina

Region VI
Robert Wall, Blacksburg, Virginia
James Givens, Winchester, Virginia
H. E. Throckmorton, Milton, West Virginia

CERTIFICATES - WIVES OF OFFICERS

Certificates to wives of retiring officers were presented by James Wall, secretary.

.....Johana Smith, wife of Bill Smith.
.....Merle McDowell, wife of Glen McDowell
.....Judy Teal, wife of Howard Teal
.....Joy Beckman, wife of Fred Beckman

Wives not present to receive certificates were:
.....Wilma Gundlach, wife of Millard Gundlach
.....Nettie Black, wife of W. T. Black

ATTENDANCE

The following past and current officers and current alternate vice presidents attended the meeting -

REGION I
- Donald Kabler - Oregon
- James Durkee - Wyoming
- Fred Beckman - Idaho
- Luther Lalum - Montana
- T. O. Beach - Arizona

REGION II
- Bill Harrison - Oklahoma
- Sam Stenzel - Kansas
- Parker Woodul - New Mexico
- Luther Hardin - Arkansas
- David McVey - Texas

REGION III
- Paul Day - Minnesota
- Francis Murphy - South Dakota
- Millard Gundlach - Wisconsin
- Grover Miehe - Iowa
- James Wall - Nebraska

REGION IV
- Odell Miller - Ohio
- John Matthews - Illinois
- Glen McDowell - Kentucky
- Jim Guilinger - Illinois

REGION V
- D. P. Whitten - Alabama
- W. D. Neil, North Carolina

REGION VI
- William Smith - New Jersey
- Julian Carter - Vermont
- Wenroy Smith - Pennsylvania
- Howard Teal - New York
- James Shadle - Pennsylvania

GUESTS ATTENDING
- Mrs. Donald Kabler
- Mrs. Fred Beckman
- Mrs. Bill Harrison
- Mrs. T. O. Beach
- Mrs. Francis Murphy
- Mrs. Odell Miller
- Mrs. Grover Miehe
- Mrs. John Matthews
- Mrs. Glen McDowell
- Mrs. William Smith
- Mrs. Julian Carter
- Mrs. Howard Teal
- Mrs. James Shadle
- Mrs. James Wall

SPECIAL PRESENTATION

Millard Gundlach, retiring past president, in behalf of the NVATA, presented a Polaroid Camera to retiring President, Glen McDowell.

REMARKS

Retiring president Glen McDowell made a few choice remarks regarding what NVATA had meant to him and how important the organization was for the well-being of the profession.

ELECTION OF OFFICERS

The following officers were "railroaded" to serve for 1971-1972 -

President - Luther Hardin of Searcy, Arkansas
Vice President - Parker Woodul of Portales, New Mexico
Secretary - James Wall of Lincoln, Nebraska

Respectfully submitted,
JAMES WALL
Executive Secretary

NVATA AWARDS BREAKFAST

Tuesday, December 7, 1971 — Portland Hilton Hotel, Ballroom B

SPONSOR

The breakfast was sponsored by the Foundation For American Agriculture, The Farm Film Foundation and The NVATA. C. Dana Bennett, Special Consultant, for the Foundations, was unable to attend but was ably represented by a member of the board, Jim Gibson.

TOASTMASTER - ATTENDANCE

Millard Gundlach, NVATA Past President was toastmaster of the event which was attended by 325 teachers of Vocational Agriculture, wives and guests.

INVOCATION

The Invocation was given by Les Olson, State President and Teacher of Vocational Agriculture, Clay Center, Kansas.

INTRODUCTIONS

The following introductions were made by the toastmaster, Millard Gundlach: -

.....NVATA Co-Host - James Boston, State President and teacher of Vocational Agriculture, Adair, Oklahoma.
.....NVATA Co-Host - J. M. Morris, State President and Teacher of Vocational Agriculture, Ohatchee, Alabama.
.....Recorder - Byron Hemmott, State President and Teacher of Vocational Agriculture, Lehi, Utah.

HONORARY LIFE MEMBERSHIP

Warren Weiler, Retired State Supervisor of Vocational Agriculture, Worthington, Ohio.

SPECIAL CITATIONS

Thomas Derveloy, State Director of Vocational Education, Baton Rouge, Louisiana.

William J. Spinabella, Director, Marketing, Research and Education, Sho-Me Power Corporation, Marshfield, Missouri.

Leonard Kunzman, Director, Vocational Education, Salem, Oregon.

Dale Aebischer, Head State Supervisor, Wisconsin, was unable to attend the convention to receive his Honorary membership in NVATA.

Those who were unable to be present to receive special citations were: -

Tom Falash, Superintendent of Schools, Weiser, Idaho.
Walter Kerfoot, Principal, Weiser High School, Weiser, Idaho
Jack Ruch, Head Teacher Educator, College of Agriculture, Laramie, Wyoming
C. H. Farley, Former Superintendent of Schools, Pikeville, Kentucky
Tilden Deskin, Superintendent of Schools, Pikeville, Kentucky
Douglas Zoller, Principal, Adirondack Central School, Boonville, N. Y.
H. P. Seamon, Retired, Principal of Schools, Boonville, New York

OUTSTANDING SERVICE AND COOPERATION AWARD

The NVATA "Outstanding Service and Cooperation Award" for 1971 was presented to the Farm Film Foundation by Toastmaster Gundlach. Accepting the award for the Foundation was Jim Gibson, member of the Board.

IDEAS UNLIMITED AWARDS

The winners of the "Ideas Unlimited Contest" were announced by Francis Murphy, NVATA Vice President, Region III. Each Regional winner received a Kodak Instamatic Camera, except that the National Winner received a radio. The NVATA Alternate Vice Presidents served as contest judges. The winners were:

Region I	Roy Faught, Lund, Nevada
Region II	Harold Walker, Hico, Texas
Region III	Donald Barber, Owatonna, Minnesota
Region IV	Grant Fettig, Grant, Michigan
Region V	Thomas Weaver, Braselton, Georgia
Region VI	Stanley Oakes, Rexford, New York

The National Winner was Donald Barber of Owatonna, Minnesota.

Respectfully submitted,
JAMES WALL
Executive Secretary

NVATA POLICIES

I. GENERAL

1. The primary purpose of the NVATA shall be for professional reasons and not for gain of individual members.

2. Interpretation of Section 2, Article III, NVATA Bylaws, entitled Membership, is inclusive of the following: Active Membership shall be defined as persons professionally qualified and certified by the State certifying agency to include secondary teachers, Junior College teachers and teachers in community colleges and university systems or similar nomenclature of programs offering less than a baccalaureate degree in Vocational Agriculture.

3. Every member has an opportunity to express his ideas and to make suggestions through his district and state organization. If his state organization believes his ideas and suggestions to be worthy of further consideration they can and should be presented at a Regional NVATA Meeting. If accepted by the Region, they can then be considered by the delegates to a National Convention and/or by the Executive Committee. Resolutions shall be presented to the NVATA Resolutions Committee no later than 6 hours after the final Regional Meeting at the National Convention and must be presented in proper form and verbage before they will be considered.

4. When reports are presented in an Executive Committee meeting, or in a general session, and accepted, it shall mean that the report is accepted for attention of the Executive Committee. Implementation of the report is the responsibility of the Executive Committee.

5. The NVATA can, through its elected officers, be prepared to and will, when the opportunity presents itself or action is needed, testify before committees of the Congress and to: provide information to Congressman and/or other officials of government; the lay public; and the membership on Bills before the Congress. This information may be factual statistics and/or philosophies and views as well as supportive or in opposition to said Bills. It shall, therefore, be the policy of the NVATA Executive Committee to act through the President and he, in cooperation with the Executive Secretary, to determine whether or not pending legislation on education or related matters will be beneficial or harmful to Vocational Education in Agriculture and to provide information to the State Associations and to any other group or individual whom they believe should be made aware of the pending legislation.

   IT SHALL also be the policy of the NVATA to not support any legislation unless said Bill or Bill's have first been cleared through the National Office by those person (s) or Group (s) promoting said legislation.

6. Membership cards are to be sent through state associations' and not to individual members, except in cases of direct membership.

7. Delegates to the National Convention and Regional Meetings shall be certified on the basis of paid membership at the time of the first Regional meetings at the Annual Convention.

8. The NVATA shall sponsor a "Coffee Hour" each year for trainees attending the National FFA Convention in Kansas City, and shall also hold a reception for instructors attending the FFA Convention.

9. The NVATA shall not endorse any product or any sales promotion plan.

II. DUTIES AND RESPONSIBILITIES OF OFFICERS

1. The representative on the AVA Advisory Council shall be the Treasurer of NVATA and the alternate shall be a first year Vice President appointed by the President.

2. In general, it shall be the policy that a Vice President may visit each association in his Region once during his term of office. Normally additional visits should be made at State Association expense. In problem or special situations the Regional Vice President in consultation with the President and Executive Secretary shall determine action in regard to second visits.

3. The President may designate the Executive Secretary, a member of the Executive Committee or a past national officer to attend the Summer Regional Leadership Training conferences.

4. The President may appoint past officers or others to represent the Association as needed.

5. The immediate Past President shall serve as chairman of the NVATA Resolutions Committee.

III. FISCAL

1. Annual year of the Association shall run from July 1 to the following June 30.

2. The Treasurer and Executive Secretary shall be adequately bonded at all times.

3. For retirement purposed six percent of the Executive Secretary's salary shall be deducted from each pay check, and a like amount shall be contributed by the NVATA. On or about January first and July first of each year the accumulated retirement monies shall be invested in the name of the current executive secretary in a manner agreeable to him and the Executive Committee of the NVATA.

4. The Executive Secretary is to be notified at the annual meeting previous to the expiration of his 3 year term of office if his services are no longer needed starting the next July 1. The Executive Secretary, in turn, shall give the committee at least 90 days notice for termination of his contract.

5. Officer expenses:
   a. Actual expenses are to be paid upon receipt of an itemized statement. (meals ordinarily allowable, $7.50 daily maximum.)
   b. Expenses for other than their regularly called meetings are to be paid upon prior approval of the President.
   c. Clerical help, postage, clerical supplies, etc. are authorized for officers and are to be paid upon approval by the President. Claims for such expenses are to be made on or about June 1 and December 1 of each year.
   d. Travel pay may be allowed (for other than state association business) within a state upon prior approval by the President.

8. Travel: If travel by auto is over 1,000 miles (round trip), the rate to be paid shall be plane fare. If travel by auto is less than 1,000 miles (round trip), the rate is to be 10¢ per mile. If other transportation is used, actual expenses incurred will be paid. When an auto is used for travel of over 1,000 miles (round trip), one additional day can be allowed for room and meals. Reimbursement for parking shall be either actual cost or double the mileage to and from the local depot or airport, whichever is less.

7. The NVATA will advance transportation costs to members of the Executive Committee upon approval of the President.

8. The President, Executive Secretary, NVATA member of the Professional Personnel Recruitment Committee and two Vice Presidents may attend the National FFA Convention at NVATA expense. The Vice Presidents from Regions II and IV shall attend in 1969, the Vice Presidents from Regions I and VI shall attend in 1970 and the Vice Presidents from Regions III and V in 1971 and this rotation shall be continued in succeeding years.

9. Alternate Vice Presidents will be allowed $100 each to attend the National Convention and $50 each to attend the Regional Leadership Conference.

10. Use of funds by special committees:
   a. Special committees working for the NVATA are encouraged to use their own funds in so far as possible to complete their assignments.
   b. NVATA funds used for special assignments shall have prior approval of the executive committee and shall be included in the budget.
   c. Any funds needed by special committees, other than their own funds, shall be secured by means approved by the executive committee.

IV. AWARDS AND RECOGNITION

1. Retiring Presidents and Vice Presidents serving for 3 years with NVATA are to be made Life Members of the organization.

2. Officer appreciation certificates and plaques are to be awarded at the end of a term of office.

3. An NVATA officer key is to be awarded at the end of one year of service in the Association. The key is to be engraved with the words "National Officer - (year)".

4. Recommended use of NVATA insignia:

   a. Membership pin or button - for all members.
   b. Service charm or pin - 5, 10 or 15 years of service.
   c. Service key or pin- 20, 25, 30 or 35 years.
   d. Retirement Key - at retirement.

5. Persons who contribute to the furtherance of Vocational Education in Agriculture on the National level may be considered for citation at the mid-year meeting of the Executive Committee.

6. Persons who have made outstanding contributions to the NVATA and the program of Vocational Education in Agriculture may be considered for Honorary Membership at the mid-year meeting of the Executive Committee.

7. State Associations shall be considered to have 100% membership only when dues have been received in the National office for every teacher of Vocational Agriculture whose name appears on the state supervisors list.

8. An engraved watch or equivalent gift, other than money, is to be provided the retiring presidents of the organization.

NVATA OFFICERS 1971 - 1972

Howard Teal	Gorge Road Boonville, New York 13309	President
Glen McDowell	Box 252 Pikeville, Kentucky 41501	Past President
Sam Stenzel	Box 731 Colby, Kansas 67701	Treasurer
James Wall	Box 4499 Lincoln, Nebraska 68504	Executive Secretary
Luther Lalum	Box 360 Kalispell, Montana 59901	V. P. Region I
Bill Harrison	Box 208 Leedey, Oklahoma 73654	V. P. Region II
Francis Murphy	Box 67-Route #4 Madison, South Dakota 57042	V. P. Region III
Odell Miller	Route #1 Raymond, Ohio 43067	V. P. Region IV
D. P. Whitten	730 College Street Centre, Alabama 35960	V. P. Region V
James Shadle	Route #2 Hegins, Pennsylvania 17938	V. P. Region VI

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NVATA ALTERNATE VICE PRESIDENTS

Roy Reno	N. 8th West Riverton, Wyoming 82501	Region I
Ray Seale	Box 147 Shiner, Texas 77984	Region II
John Murray	Box 43 Jackson, Minnesota 56143	Region III
Jim Guilinger	197 Nichols Drive Sycamore, Illinois 60178	Region IV
H. I. Jones	Route #1 Silver Creek, Georgia 30173	Region V
George Dunsmore	Route #2 St. Albans, Vermont 05478	Region VI

VT 017 620
GETTING IT ALL TOGETHER: 1971 EVALUATION REPORT FOR NEBRASKA ADVISORY COUNCIL FOR VOCATIONAL AND TECHNICAL EDUCATION.

NEBRASKA STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION, LINCOLN.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - AUG71 18P.

DESCRIPTORS - EVALUATION; PROGRAMS; *VOCATIONAL EDUCATION; *PROGRAM EVALUATION; *PROGRAM EFFECTIVENESS; PROGRAM IMPROVEMENT; *EDUCATIONAL NEEDS; *STATE SURVEYS
IDENTIFIERS - *NEBRASKA

ABSTRACT - AN EVALUATION OF VOCATIONAL EDUCATION IN THE STATE OF NEBRASKA. DOCUMENTATION APPEARING IN THIS REPORT ARE THE RESULTS OF ASSESSMENT ACTIVITIES CONDUCTED BY A TEAM FROM THE ADVISORY COUNCIL OVER A 1-YEAR PERIOD. INCLUDED IN SUMMARIZED VERSIONS ARE ACHIEVEMENTS, WEAKNESSES, AND RECOMMENDATIONS OF NEW EMPHASIS AREAS TO BE ADDED TO THE CURRENTLY OPERATING PROGRAM. INCENTIFIED THROUGH PERSONAL INTERVIEWS WITH INDUSTRIAL EMPLOYERS ARE THE THREE MAJOR STATE PRIORITY NEED AREAS: (1) GUIDANCE AND COUNSELING, (2) OCCUPATIONAL TEACHER PREPARATION, AND (3) IMPROVING THE IMAGE OF VOCATIONAL EDUCATION. A BIBLIOGRAPHY AND APPENDIXES CONTAINING PROGRAM STATISTICAL DATA ARE INCLUDED. (SN)

VT 017 620

FILMED FROM BEST AVAILABLE COPY

GETTING IT ALL TOGETHER

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

1971 ANNUAL EVALUATION REPORT
NEBRASKA ADVISORY COUNCIL for VOCATIONAL and TECHNICAL EDUCATION

AUGUST, 1971

VT017820

PURSUANT TO:

VOCATIONAL EDUCATION AMENDMENTS OF 1968 P.L. 90-576

2113

NEBRASKA STATE BOARD OF VOCATIONAL EDUCATION

Board Members

Mr. Frank E. Landis, President
Mr. Gerald T. Whelan, Vice President
Mr. Patrick L. Cooney
Mrs. Shirley A. Peterson
Dr. Allen P. Burkhardt
Mrs. Marilyn Fowler
Mr. Lloyd V. Wright
Mr. F. Y. Knapple

Mr. Cecil E. Stanley
Commissioner of Education

Mr. Glen H. Strain, Assistant Commissioner
for Vocational Education

NEBRASKA STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION

Evaluation Committee Structure

Virginia Vieregg, Chairman

C. A. Cromer, Executive Director

Goal I: STATE GOALS AND PRIORITIES

Emmett Lee, Chm.
Melvin Breeden
Edwin Parrish
Tom Elson

GOAL II: SERVING PEOPLE AND THEIR NEEDS

Don Bastemeyer, Chm.
Stan Matzke
Merle Jones
Ken Wortman
Lawrence McVoy
Max Hensley

GOAL III: EXTENT TO WHICH COUNCIL RECOMMENDATIONS HAVE RECEIVED DUE CONSIDERATION

William Ptacek, Chm.
Robert Draney
Father John Flynn
Alan Plantz

Goal IV: IMPROVING THE IMAGE OF VOCATIONAL EDUCATION

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August 20, 1971

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A. TRANSMITTAL LETTER

TO: The Nebraska State Board of Vocational Education

FROM: The Nebraska Advisory Council for Vocational Education

SUBJECT: The 1971 State Evaluation of Vocational Education

Transmitted herewith is the annual evaluation report of the Nebraska Advisory Council for Vocational Education. This report is in compliance with Section 102.23 of Rules and Regulations of P.L. 90-576. This is the second evaluation report to be completed by the Nebraska Council.

The Council respectfully directs the State Board's attention to the statutory requirement that this report is to be submitted to the U.S. Office of Education Commissioner and National Advisory Council by October 1. This report may be accompanied by such comments from the State Board as deemed appropriate. Such comments may be directed to issues that support or differ with evaluation results of the Council.

This report is submitted with the sincere belief that implementation of recommendations will result in educational benefit and enhanced employability for the people of Nebraska.

Respectfully submitted,

Virginia Vieregg

Virginia Vieregg
Chairman

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September 8, 1971

Dr. C. A. Cromer, Executive Director
Nebraska State Advisory Council for
Vocational Education
Box 33, Henzlik Hall
University of Nebraska
Lincoln, Nebraska 68508

Dear Dr. Cromer:

The oral report on the evaluation of vocational education was presented to the State Board for Vocational Education on Friday, September 3, 1971. Ten days prior to that time all State Board members received copies for study and review.

The State Board is appreciative of the many hours of study and research which have gone into the 1971 Council report and is in agreement with the findings and recommendations. The Council's evaluation has been derived from a conscientious evaluation of vocational education in the State and is a constructive and realistic assessment. The State Board urges all organizations and agencies to which recommendations have been addressed in the report to comply to the best of their ability.

Specifically, the Board supports the concept of career education, as developed by the U. S. Office of Education and recommended by the Council, to assure more relevance and realism to our total educational approach.

Sincerely,

Cecil E. Stanley

CECIL E. STANLEY
Commissioner of Education and
Executive Officer of the State Board
of Vocational Education

S/MN

CC: Mrs. Vieregg

B. SUMMARY STATEMENT

Many different aspects of vocational education in Nebraska have been considered in this evaluation. In addition, the concept of career education was injected into recommendations which were offered. After considering the variety of influences which affect vocational education in Nebraska, the Council decided that the overall theme of the evaluation should be phrased in the language of the "now" generation–Getting It All Together.

The underlying philosophy of career education as advocated by Commissioner Marland is the merging of general and vocational education into a concept which is more responsive to the present-day educational needs. Other benefits of the merger are greater relevance and realism in terms of our modern society.

This report also incorporates the other influences that affect vocational education; such as, occupational orientation, preparation of teachers, and the image in which vocational education is viewed, to name a few. In assembling these influences into an annual evaluation report, the Council felt the theme of "Getting It All Together" to be most appropriate.

A new feature in the 1971 report is the identification of top State priority need areas. This was done to emphasize the urgency of the need to marshal the various resources toward corrective action. Another new feature is the shading which was used to make the Council's recommendations stand out from the related rationale in the report.

An evaluation of the product of vocational education was conducted this year for the first time and is included as part of the report. Personal interviews were made to industrial employers for the purpose of obtaining their evaluation of the quality and benefit of four different types of previous preparation of their employees. A specially adapted semantic scale was developed to measure the employers' reactions. The procedure holds promise for assessment of other areas of education.

This report is addressed to many groups, organizations and agencies whose support is needed for the implementation of the recommendations. The Council especially solicits the cooperation from the agencies that are concerned in the priority areas of the report and the Nebraska State Board for Vocational Education. The priorities designated and the need for increased professional personnel are key factors in realizing the full potential of the Act.

Base line documentation for recommendations of this report are the result of assessment activities which have been in process throughout the year. A special appreciation is extended to those individuals and agencies that provided data for the evaluation activities. Their cooperation was a great help to the Council and provided documentation for the recommendations.

C. EVALUATION AREAS

GOAL I: STATE GOALS AND PRIORITIES

1. A NEW EMPHASIS FOR EDUCATION

THE COUNCIL RECOMMENDS TO THE STATE BOARD FOR VOCATIONAL EDUCATION AND THE LOCAL BOARDS OF EDUCATION THAT A NEW EMPHASIS BE PLACED ON BOTH ACADEMIC AND VOCATIONAL EDUCATION IN TERMS OF THE PHILOSOPHY OF CAREER EDUCATION. SPECIFICALLY, THE COUNCIL IS SUGGESTING THAT ALL STUDENTS BE AFFORDED THE OPPORTUNITY, AT THE ELEMENTARY AND SECONDARY SCHOOL LEVELS, TO ACQUIRE AWARENESS, EXPLORATION, ORIENTATION, AND IMPLEMENTATION TOWARD ENTRY LEVEL SALABLE EMPLOYMENT. Career education is best described as an integration of vocational education into the presently academically oriented curriculum in an effort to make the total educational program more realistic as it relates to professional or occupational goals. This philosophy has been expressed by Dr. Sidney P. Marland, Jr., U.S. Commissioner of Education, in an address, *Career Education Now*: [2]

> I want to state my clear conviction that a properly effective career education requires a new educational unity. It requires a breaking down of the barriers that divide our educational system into parochial enclaves. Our answer is that we must blend our curricula and our students into a single strong, secondary system. Let the academic preparation be balanced with the vocational or career program. Let one student take strength from another. And, for the future hope of education, let us end the divisive, snobbish, destructive distinctions in learning that do no service to the cause of knowledge, and do no honor to the name of American enterprise.
>
> It is terribly important to teach a youngster the skills he needs to live, whether we call them academic or vocational, whether he intends to make his living with a wrench, or a slide rule, or folio editions of Shakespeare. But it is critically important to equip that youngster to live his life as a fulfilled human being. As Secretary Richardson said, "I remind you that this department of government more than anything else is concerned with humanness."

To accomplish this restructuring of educational emphasis, the Advisory Council for Vocational Education suggests that Nebraska secondary schools implement the following recommendations:

a. **THE SCHOOLS' EFFORT IN OCCUPATIONAL ORIENTATION TO THE WORLD OF WORK SHOULD BE**

INCLUDED IN THE GRADES, THROUGHOUT JUNIOR HIGH, AND AT THE SENIOR HIGH LEVELS. A GREATER EFFORT IS NEEDED IN DEVELOPING THEIR FULL HUMAN RESOURCE POTENTIAL

b. NEBRASKA SECONDARY SCHOOLS SHOULD GIVE MUCH MORE ATTENTION TO THEIR STUDENT DROPOUT PROBLEM.[7] A SPECIAL CONSIDERATION SHOULD BE GIVEN TO PROVIDING MORE FLEXIBLE CURRICULA WHICH ARE MORE RELEVANT TO THE POTENTIAL DROPOUT. Data have been developed which assist schools in recognizing the characteristics of a potential dropout long before the student actually leaves the school.

c. SCHOOLS WITH OCCUPATIONAL PROGRAMS SHOULD ENCOURAGE MORE STUDENTS TO ENROLL IN THESE CLASSES. MANY OF THE CLASSES COULD CARRY A LARGER ENROLLMENT. THE REASONS STUDENTS DO NOT ENROLL IN OCCUPATIONAL PROGRAMS SHOULD BE CLOSELY MONITORED WITH CORRECTIVE ACTION TAKEN LOCALLY TO ASSURE HIGH EDUCATIONAL QUALITY OF THE PROGRAM.

d. The fact that opportunities for vocational education have not been provided for many students is an educational injustice which needs immediate attention. THE MOST CRITICAL NEED FOR A BROAD OCCUPATIONAL OFFERING IS FOUND IN THE INNER-CITY GHETTO AND RURAL POVERTY AREAS. THE COUNCIL RECOMMENDS THAT THE OPPORTUNITY FOR VOCATIONAL EDUCATION BE EXTENDED TO ALL STUDENTS, REGARDLESS OF THEIR LOCATION IN THE STATE OR THE SCHOOL DISTRICT WHICH THEY ARE ATTENDING.

e. THE COUNCIL BELIEVES THAT THE COMPREHENSIVE HIGH SCHOOL IS THE MOST FEASIBLE SECONDARY SCHOOL STRUCTURE FOR MEETING THE NEEDS FOR ALL YOUTH. SECONDARY SCHOOLS WHICH SERVE ONLY THE LIBERAL ARTS NEEDS OF YOUTH ARE NOT REALISTICALLY PREPARING THEIR STUDENTS FOR THE DEMANDS OF OUR PRESENT SOCIETY.

ONE OF NEBRASKA'S MOST DYNAMIC RESOURCES IS HER YOUNG PEOPLE. EACH PROSPECTIVE CITIZEN SHOULD HAVE THE OPPORTUNITY TO DEVELOP WHATEVER SKILLS HE NEEDS TO ENTER AND BE SUCCESSFUL IN THE WORK FORCE. IT SHALL BE THE GOAL OF THIS STATE TO MAKE OCCUPATIONAL EDUCATION AVAILABLE TO EACH PERSON AS A PART OF HIS EDUCATIONAL PROCESS. THE EDUCATIONAL EXPERIENCES OF STUDENTS SHOULD BE TIED CLOSELY TO THEIR FUTURE CAREER GOALS.

2. VOCATIONAL LEADERSHIP PERSONNEL

Inadequate staff within the State Division of Vocational Education seriously limits the statewide expansion of vocational education. Local schools must have individual guidance and interpretation to grasp new concepts and implement the many special features in the Vocational Education Act in the scope needed to serve the whole state of Nebraska. Personnel limitations imposed by the Nebraska Legislature and the Governor are inconsistent in meeting the needs of the State and are woefully inadequate in terms of making maximum utilization of this valuable educational resource. Present enrollment in the following vocational education programs is far below the employment opportunities which have been identified within the State: [4]

a. Wage-earning Home Economics
b. Health Occupations
c. Trade and Industrial Occupations
d. Vocational Adult Education
e. Off-farm Agriculture
f. Disadvantaged and Handicapped

Since the passage of the 1968 Amendments[11] there have been many more categorical areas, increased program scope, and administrative responsibilities without a proportional staff increase.

THE COUNCIL VIEWS THE RESTRICTED ADMINISTRATIVE STAFF OF THE VOCATIONAL DIVISION AS A SERIOUS DETERRENT TO FUTURE GROWTH AND EXPANSION OF VOCATIONAL EDUCATION STATEWIDE. THIS PERSONNEL RESTRICTION MUST BE REMOVED IN ORDER FOR NEBRASKA TO REALIZE THE FULL POTENTIAL OF THE ACT.

3. NEW PRIORITIES

A good showing has been achieved in the new features of the Vocational Education Amendments of 1968. The evaluation of the first full year of operation shows commendable activity in the following categories under the Act: [3]

a. Cooperative programs (Part G) including mediated instructional aids
b. Enrollment in postsecondary programs
c. Exemplary programs (Part D)
d. Vocational research (Part C)
e. Work Study
f. State plan for Educational Professions Development
g. Disadvantaged and handicapped (Part B)

The statewide progress in serving the disadvantaged has been notable. The needs of many urban and rural disadvantaged have been served, but many more have not been reached. The areas of high priority where the greatest need is presently identified is the ghetto community of our metropolitan cities and the state institutions that are involved with rehabilitation type educational programs. TO BE EFFECTIVE IN REACHING THIS EDUCATIONAL SEGMENT WILL REQUIRE MORE LOCAL EFFORT AND INCREASED STATE LEADERSHIP BECAUSE OF THE MAGNITUDE OF THE TASK.

The growth and expansion of other new aspects under the Vocational Education Act of 1968 are hampered by the State staff personnel restriction mentioned previously. In many cases, new program administration has become an added assignment to an already overloaded staff member. THE COUNCIL RECOMMENDS TO THE STATE BOARD OF VOCATIONAL EDUCATION THAT ADDITIONAL FULL TIME VOCATIONAL STAFF MEMBERS BE ADDED TO INCLUDE ADMINISTRATIVE PERSONNEL TO ASSIST WITH STATE AND LOCAL PLANNING, EDUCATIONAL CURRICULUM DEVELOPMENT AND THE BUDGETING PROCESS. OTHER NEEDED STAFF INCLUDE: A DIRECTOR FOR HEALTH OCCUPATIONS, A CONSULTANT FOR ADULT BASIC EDUCATION, A CONSULTANT FOR BUSINESS AND OFFICE OCCUPATIONS, A CONSULTANT FOR HOME ECONOMICS RELATED OCCUPATIONS, AND SUPPORTING CLERICAL ASSISTANCE.

4. VOCATIONAL PLANNING

There still appear to be some local communities conducting the same type of vocational program(s) with the same emphasis that prevailed before the Vocational Education Act of 1963. Many local vocational programs could benefit from the new aspects of the 1963 Act; such as: off-farm agriculture, wage-earning home economics, cooperative programs and other aspects of the new vocational education acts as determined by the local need.

SECONDARY SCHOOLS SHOULD PLACE MORE EMPHASIS ON PREPARING STUDENTS TO ENTER POSTSECONDARY VOCATIONAL TECHNICAL SCHOOLS AND UPON PROVIDING THE NECESSARY LEARNING EXPERIENCES SO THEY CAN SUCCESSFULLY COMPLETE THAT INSTRUCTION BY:

a. PROVIDING MORE EXPLORATORY WORK IN THE PREVOCATIONAL AND VOCATIONAL COURSES.

b. COMBINING VOCATIONAL AND GENERAL EDUCATION SO THAT EDUCATION BECOMES MORE MEANINGFUL TO THE POTENTIAL DROPOUT AND TO THE DISADVANTAGED LEARNER AS WELL AS TO THE MOTIVATED STUDENT.

AS MORE WOMEN ARE ENTERING THE LABOR MARKET, SECONDARY AND POSTSECONDARY SCHOOLS SHOULD REFLECT BROADER CURRICULA TO MEET THEIR NEEDS IN ALL MAJOR SECTIONS OF VOCATIONAL EDUCATION.

VOCATIONAL PROGRAM PLANNING SHOULD TAKE INTO CONSIDERATION THE NEW AND EMERGING OCCUPATIONAL AREAS. THE U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE *VOCATIONAL EDUCATION AND OCCUPATIONS* PUBLICATION 9 SHOULD BECOME THE BASIS FOR LOCAL VOCATIONAL CURRICULAR PLANNING. VOCATIONAL COURSE CONTENT SHOULD PROVIDE FOR JOB CLUSTERS OR GROUPS OF JOBS WITHIN A BROAD OCCUPATIONAL INSTRUCTIONAL PROGRAM.

5. LOCAL VOCATIONAL PLANS

The Council is concerned with the quality of local planning that is reflected in many of the local applications for vocational education. [6] The guide for preparing local plans has been revised and simplified to facilitate the local planning effort. IN REVIEWING THE LOCAL PLANS IT IS DIFFICULT IN MANY CASES TO FIND EVIDENCE OF INVOLVEMENT AND CONSULTATION WITH LOCAL VOCATIONAL EDUCATION ADVISORY COUNCILS AND OTHER GROUPS WHICH HAVE INPUT TO EDUCATIONAL AGENCIES FOR MEETING THE VOCATIONAL NEEDS OF INDIVIDUALS AND THE COMMUNITY. IN SOME CASES IT MAY NOT BE POSSIBLE TO JUSTIFY THE PRESENT VOCATIONAL OFFERING FROM THE NEEDS AND OPPORTUNITIES WHICH HAVE BEEN SET FORTH IN THE LOCAL APPLICATION. The diversity of input and quality of data make it impossible to project a state need by summarizing the local plans which have been submitted.

A special commendation is extended to the sixty-plus local educational agencies in the State which scheduled special meetings and solicited assistance from the State Vocational Division staff for the purpose of discussing their local application for vocational education and improving the quality of planning effort.

6. FOLLOWUP

THE COUNCIL RECOMMENDS THE STATE BOARD OF VOCATIONAL EDUCATION SHOULD INITIATE A SYSTEM OF STUDENT FOLLOWUP ON A DEMONSTRATIVE BASIS WITH THE VIEW THAT SUCH A SYSTEM COULD BE IMPLEMENTED STATEWIDE BY SEPTEMBER, 1973. IT IS FURTHER RECOMMENDED THAT THE SYSTEM BE BASED ON SOCIAL SECURITY NUMBERS AS A MEANS OF STUDENT IDENTIFICATION. An analysis of the local plans for vocational education revealed that local schools are unaware, for the most part, of their effectiveness in serving students. **LOCAL SCHOOLS SHOULD BE INVOLVED IN THE STATE SYSTEM OF STUDENT FOLLOWUP AS THE FEEDBACK FROM FORMER STUDENTS IS VITAL IN MEETING STUDENT NEEDS.**

7. ADULT EDUCATION

It was learned from the survey of administrators of vocational programs [10] that adult education was a lower educational priority for the secondary schools. Even though adult education is served by the community colleges in some localities, the local educational system is the only medium through which such a program may be made available to most local communities. **THE COUNCIL RECOMMENDS THAT THE PUBLIC SECONDARY SCHOOLS BE RESPONSIVE TO THE TOTAL EDUCATIONAL NEEDS OF THE COMMUNITY, INCLUDING EDUCATION FOR THE ADULTS.**

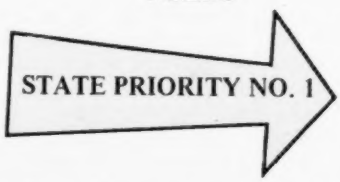
8. VOCATIONAL ORIENTATION OF ADMINISTRATORS

It was also learned from the administrator survey that fewer than half of all superintendents and principals of secondary schools in the State have had vocational courses or formal orientation to vocational education in their professional preparation. **THE COUNCIL SUGGESTS THAT ADMINISTRATORS WITH VOCATIONAL PROGRAM OFFERINGS BECOME MORE PROFESSIONALLY ORIENTED WITH VOCATIONAL PROGRAMS AND PHILOSOPHIES THROUGH INSERVICE COURSES EITHER ON OR OFF CAMPUS.**

9. COMMUNICATION BETWEEN VOCATIONAL TEACHERS AND ADMINISTRATORS

Reactions from administrators indicated that communication with the vocational teachers should be improved to facilitate the program operation. Of particular importance are the special provisions that pertain specifically to vocational programs; such as, extended contracts, local advisory councils, vocational image, and programs for disadvantaged. **BETTER COMMUNICATIONS ARE SUGGESTED AS A MEANS TO IMPROVING EDUCATIONAL QUALITY. AT THE SAME TIME, VOCATIONAL INSTRUCTORS SHOULD BE AWARE OF THEIR RESPONSIBILITY TO THE ENTIRE LOCAL SCHOOL SYSTEM.** Some vocational teachers have confined their activities to their program and have become isolated from the the rest of the school system.

GOAL II: SERVING PEOPLE AND THEIR NEEDS



GUIDANCE AND COUNSELING

The information service, one of the basic services in the school guidance program, focuses on educational and occupational information and planning. Realistically, the educational needs of students cannot be adequately met unless the student has set challenging life goals, including goals related to the "world of work." Making wise decisions related to occupational choices, at best, is not an easy task. **THUS, IT BECOMES IMPERATIVE THAT SCHOOLS ORGANIZE GUIDANCE PROGRAMS WHICH ASSIST STUDENTS IN UNDERSTANDING THE WORLD OF WORK, EXPLORING THEIR VOCATIONAL INTEREST, AND PLANNING THAT TYPE OF CONTINUING EDUCATIONAL PROGRAM WHICH WILL BEST ENABLE THEM TO REACH THEIR GOALS.**

The K-14 orientation to the world of work should include the total educational system as recommended by U.S.O.E. Commissioner Marland [2] in the Career Education Models which suggests as follows:

K-6 An awareness program of the world of work
7-9 Exploratory and orientation experiences in vocational education
10-12 Further exploration and entry level training
13-14 Indepth technological training

a. **IN ALL INSTRUCTIONAL AREAS, FROM THE GRADES THROUGH JUNIOR AND SENIOR HIGH SCHOOLS, ORIENTATION TO THE WORLD OF WORK NEEDS TO BE GREATLY INCREASED.** Exemplary projects funded for this purpose have shown encouraging promise. **A GREATER COMBINED EFFORT ON THE PART OF ALL EDUCATORS IS NEEDED TO ASSIST STUDENTS IN MAKING WISE OCCUPATIONAL DECISIONS, CONTINUING THEIR EDUCATION, AND DEVELOPING THEIR FULL HUMAN RESOURCE POTENTIAL.**

b. The importance of occupational guidance to the total school system has been reflected in the frequency with which Exemplary Programs funded through the State Board have focused upon this problem. Exemplary projects are now underway which are developing new approaches to occupational orientation through:

1. Integrating the elementary curriculum
2. Use of a mobile unit
3. Individualized single-loop film concepts
4. Better serving the dropout

Schools seeking solutions to problems may find approaches and materials already developed within the state which are applicable to their situations.

c. **THE COUNCIL SUGGESTS THAT ALL POSSIBLE METHODS OF INDOCTRINATION BE UTILIZED TO PREPARE COUNSELORS AND TEACHERS TO ORIENT STUDENTS TO THE WORLD OF WORK MORE EFFECTIVELY, USING INNOVATIVE APPROACHES; SUCH AS, ETV AND INSERVICE SESSIONS. WORKSHOPS FOR GUIDANCE COUNSELORS SHOULD BE PROVIDED TO INCREASE AWARENESS OF MEANS AVAILABLE, PARTICULARLY ON THE SECONDARY LEVEL, FOR INDIVIDUAL AND GROUP WORK DISCOVERY PROJECTS, PROPER USE OF APPROPRIATE TESTING SERVICES, AND DEVICES.**

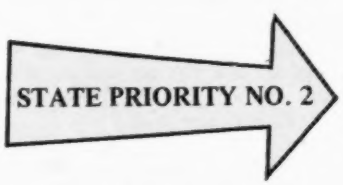
d. In summarizing the testing activities which have been conducted throughout the state [6] it was found that schools are conducting four times as many intelligence tests as vocational aptitude and interest tests. The analysis shows that some schools which were offering vocational classes were doing no aptitude or interest testing. It would certainly seem that determination of student interest and aptitudes would be a prerequisite to meeting their educational and occupational needs.

e. **GREATER EFFORT SHOULD BE MADE (1) TO AROUSE THE INTEREST OF BUSINESS, INDUSTRY, AND TRADE PERSONNEL, (2) TO UTILIZE THEIR ADVICE, AND (3) TO MAKE ADMINISTRATORS, TEACHERS, AND CITIZENS AWARE OF THE NEED FOR IMPROVED GUIDANCE AND COUNSELING PROGRAMS IN "CAREER EDUCATION."**

f. **COUNSELORS' CONTRACTS SHOULD BE EXTENDED BEYOND THE BASIC NINE MONTHS TO (1) HELP STUDENTS SECURE SUMMER EMPLOYMENT, (2) DETERMINE LOCAL OCCUPATIONAL OPPORTUNITIES AND COMMUNITY NEEDS, AND (3) ASSIST IN THE PREPARATION FOR THE LOCAL PLAN FOR VOCATIONAL EDUCATION.** This concept could be joined with Federal and State programs which now provide incentive for other vocational education programs.

g. **EDUCATIONAL SERVICE UNITS ARE ENCOURAGED TO BECOME INVOLVED IN PROVIDING CAREER ORIENTATION FOR SCHOOLS IN THEIR SERVICE AREA.** Many smaller schools are without the services of a full time counselor, and providing this service on an area basis may be the best approach to the problem.

h. Another important source of occupational information is the state system of technical community colleges. Students, secondary schools, and counselors may now seek assistance from these agencies to supplement career orientation resources.



OCCUPATIONAL TEACHER PREPARATION

It is self-evident that the preparation of occupationally comptetent vocational teachers at the secondary and postsecondary levels, represents a critical limiting factor to the viable growth and expansion of occupational education for today's youth in Nebraska.

An analysis of the State's accomplishment in occupational teacher preparation has prompted the following recommendations:

a. The organization of the Council for Occupational Teacher Education in October of 1969 was a commendable accomplishment.

b. A greater coordination of combined effort is necessary to meet the needs of occupational teacher preparation in the State. Teacher education agencies now function as separate entities when, in reality, there exist many commonalities among the agencies. **THE COUNCIL RECOMMENDS THE ESTABLISHMENT OF A DEPARTMENT OF OCCUPATIONAL TEACHER EDUCATION WITHIN THE PARENT INSTITUTIONS TO PROVIDE THE NEEDED COORDINATION YET ALLOW FOR THE INDIVIDUALITY OF THE AGENCIES.**

c. The mortality dropout rate of those prepared and certified to teach, compared with the number of individuals who actually take vocational teaching jobs, is a situation which contributes to the problem of teacher shortage. (Appendix B) **EACH OCCUPATIONAL TEACHER EDUCATION AGENCY MUST ASSUME A GREATER ACCOUNTABILITY FOR PLACEMENT AND FOLLOWUP OF THOSE QUALIFIED TO TEACH IN VOCATIONAL PROGRAMS.**

d. **RECRUITMENT OF ENOUGH INDIVIDUALS TO FILL THE STATE NEEDS SHOULD BE A RESPONSIBILITY OF THE TEACHER EDUCATION AGENCY.** The annual teacher needs should be a well-calculated fact. Recruitment of the number needed should be commensurate with the need identified.

e. **THE RESEARCH RESPONSIBILITY FOR VARIOUS INDIVIDUAL OCCUPATIONAL AREAS SHOULD BE CENTERED WITHIN THE TEACHER PREPARATION AGENCY AND COORDINATED THROUGH THE NEBRASKA RESEARCH COORDINATING UNIT FOR VOCATIONAL EDUCATION.** The teacher preparation agencies should be alert to the utilization of the supportive funds as appropriated through Part C, 90-576. and Title II, Part F, 90-576. E.P.D.A.

f. **TEACHER EDUCATION SHOULD ASSUME A RESPONSIBILITY FOR THE PREPARATION OF TEACHERS FOR THE DISADVANTAGED AND HANDICAPPED AS AN INTEGRAL PART OF THEIR RESPONSIBILITY.** Example: Teachers certified to teach vocational home economics should be prepared to teach the disadvantaged in that instructional area.

g. **THE NEED FOR TEACHER PREPARATION FOR HEALTH OCCUPATIONS IS STILL UNMET IN NEBRASKA. SUCH A PROGRAM SHOULD BE ESTABLISHED WITHIN THE VOCATIONAL TEACHER EDUCATION DEPARTMENT OF A FOUR-YEAR EDUCATIONAL INSTITUTION WITHIN THE STATE.** The major emphasis in the beginning should be on inservice education and should be oriented directly to serve secondary, postsecondary, and adult educational needs in the Health Occupations areas.

3. COORDINATION AND ARTICULATION AMONG SECONDARY, POSTSECONDARY, AND ADULT EDUCATION AGENCIES

The Council found need for more articulation between secondary programs and postsecondary and adult education agencies. The format for coordination of these agencies has been established and functioning in some instances. Certainly, with the passage of L.B. 759 [1] there should be improved coordination of the levels of vocational education within the state.

4. STATE DATA FOR DETERMINING JOB OPPORTUNITIES AND MANPOWER NEEDS

The Nebraska Model for Determining Occupational Opportunities [4] in terms of employer needs is a well-conceived procedure in Nebraska which fulfills the stipulations in P.L. 90-576. Dr. Thaine McCormick, Region VII Director for Adult, Vocational, and Technical Education, has commended Nebraska's data as meeting the needs as well as any state in his region.

CONTINUED EFFORT SHOULD BE GIVEN TO PERFECTING AND UPDATING THESE DATA. THE MASTER INDEX OF FIRMS SHOULD BE UPDATED AND THE UPDATING CONTINUED ON AN ANNUAL BASIS UNTIL A DATA BASE IS WELL ESTABLISHED AND STABILIZED FOR EACH OF THE OCCUPATIONAL CLUSTERS UPON WHICH PROJECTIONS ARE BEING ATTEMPTED.

The cooperation which has been developed between vocational education and the State Department of Labor has proven wholesome and beneficial to both agencies in fulfilling their responsibilities.

5. PLACEMENT AND FOLLOWUP OF STUDENTS

The Vocational Amendments of 1968 [11] have increased the emphasis upon placement and followup of students. In general, the technical colleges have been doing the most conscientious, systematic job of student placement and followup of former students. **THE COUNCIL RECOMMENDS THAT MORE SECONDARY SCHOOLS BECOME INVOLVED IN THE PLACEMENT AND FOLLOWUP OF STUDENTS AS A PART OF THEIR ON-GOING PROGRAM OF SERVING STUDENTS.**

6. OCCUPATIONAL AWARENESS AND ORIENTATION

Within the state a good beginning has been made toward integrating world of work illustrations and examples into the elementary offerings. The U.S. Office of Education has given leadership to this issue through the implementation of the career models. **THE COUNCIL ESPECIALLY RECOMMENDS THAT EACH SCHOOL SYSTEM IN THE STATE MAKE A THOROUGH STUDY OF THE CAREER EDUCATION MODELS WITH CONSIDERATION TO IMPLEMENTATION.** Guides for integrating the elementary curriculum have been developed and are in the testing stage. The implementation stage should be already for consideration. Assistance can be obtained from the Division of Vocational Education, teacher education agencies, or the RCU.

7. INDICATION THAT VOCATIONAL PROGRAMS MEET THE NEEDS

During the past year the Council conducted a study to quantify the quality and effectiveness of vocational educational programs in the state. A reactionaire was designed to measure the capabilities of vocational trainees as compared with non-vocational students as viewed by personnel directors and managers of industrial firms in the state. (Appendix C). Four groups of workers were categorized according to their educational preparation; i.e.:

Group I – Less than high school graduate with no vocational education.

Group II: High school graduate without vocational education

Group III: High school graduate with vocational education

Group IV: Students with post secondary vocational education

The personnel directors and managers were asked to rate the four groups on a seven point semantic scale using bipolar adjectives for eleven competency areas.

The firms interviewed were randomly taken from a list of manufacturers compiled by the State Department of Economic Development. [5] A total of 103 firms was interviewed personally. Vocational trainees were accorded substantial advantage over those without vocational training in all eleven areas with the greatest advantage in mathematical skills, reading and interpretive skills, communication skills, theoretical job knowledge and clerical skills. Lesser advantages were shown in work safety attitude, supervisory skills, personal relations and attitude toward work. In all eleven categories the high school dropout rated well below the other groups. The study confirmed the value of vocational training programs for preparing students for industrial type jobs.

THE FACT THAT 42.5 PERCENT OF THE RESPONDENTS COULD NOT DISTINGUISH A DIFFERENCE AMONG THE GROUPS BEING EVALUATED INDICATES THAT EMPLOYER AND STUDENT NEEDS COULD BE BETTER SERVED. THE FACT THAT NEGATIVE VALUES APPEARED IN GROUPS III AND IV IS EVIDENCE THAT SOME VOCATIONAL STUDENTS STILL LACKED CHARACTERISTICS WHICH WOULD MAKE THEM OF MAXIMUM VALUE TO THEIR EMPLOYER.

8. SERVING THE DISADVANTAGED

The accomplishments of the State in serving the disadvantaged have been encouraging when considering the progress to date. (Appendix A). The Vocational Division leadership has been fully dedicated to expanding this area of education, and substantial growth has been recorded. The projects funded by the Exemplary Program funds have been directly oriented to serving a segment of the disadvantaged. However, the fact remains that only a small segment of the total state need has been met to date, and the need to expand the total state effort in serving the disadvantaged is clearly indicated. **LOCAL SCHOOL AGENCIES HAVE NEED TO FURTHER EXPAND PROGRAMS TO SERVE THOSE WHO ARE NOT BENEFITTING FROM THE REGULAR INSTRUCTION AND TO RESTRUCTURE THE EDUCATIONAL OFFERING TO BECOME MORE RELEVANT AND MEANINGFUL TO THESE STUDENTS.**

The availability of teachers with specific preparation to work more effectively with disadvantaged students also has been a deterrent to expansion in this area. This need has been

recognized by the Vocational Division. A summer inservice training work shop has been conducted the past two years to assist teachers to meet this instructional need; this should be a great help in providing specially prepared teachers for this instructional area.

IN ORDER TO FURTHER IMPLEMENT PROGRAMS FOR THE DISADVANTAGED, THE COUNCIL RECOMMENDS THAT A SERIES OF NOT FEWER THAN FOUR MEETINGS BE SCHEDULED DURING THE EARLY FALL IN THE MAJOR POPULATION CENTERS OF THE STATE. THESE MEETINGS ARE TO BE FOR THE PURPOSE OF ASSISTING EDUCATORS IN DEVELOPING PROGRAMS TO BETTER SERVE THE DISADVANTAGED.

9. INVOLVING OUTSIDE AGENCIES IN EDUCATION

EDUCATIONAL AGENCIES AND THE APPRENTICESHIP SYSTEM SHOULD DEVELOP CLOSER TIES IN ASSESSING THE STATEWIDE OCCUPATIONAL TRAINING NEEDS. LOCAL EDUCATIONAL AGENCIES SHOULD ALSO SOLICIT INPUT FROM EMPLOYER ASSOCIATIONS, LOCAL LABOR UNIONS, AND THE COOPERATIVE AREA MANPOWER PLANNING SYSTEM (CAMPS) IN STRUCTURING AND REDESIGNING OCCUPATIONAL TRAINING PROGRAMS AT THE LOCAL LEVELS. IN PARTICULAR, SUCH THINGS AS CRAFTMANSHIP, DIGNITY OF WORK, ENTHUSIASM FOR LEARNING, AND PERSONAL GROWTH CAN BE MADE MORE RELEVANT AND MEANINGFUL. BUSINESS AND INDUSTRY CAN EXERT A GREAT IMPACT UPON YOUNG PEOPLE IN MAKING THEM AWARE OF THE POTENTIAL EARNING POWER IN THE VARIOUS VOCATIONAL CAREERS. THE INFLUENCE OF THESE AGENCIES CAN MAKE AN IMPORTANT CONTRIBUTION TO THE VOCATIONAL YOUTH CLUBS AND THE LEARNING ACTIVITIES OF THE INSTRUCTIONAL PROGRAM.

GOAL III: EXTENT TO WHICH COUNCIL RECOMMENDATIONS HAVE RECEIVED DUE CONSIDERATION

1. TO WHOM RECOMMENDATIONS WERE MADE

Many specific groups and individuals were addressed in the 1970 evaluation.[3] Those who were designated in the report included the State Board of Vocational Education, the Division of Vocational Education, local school boards, secondary and postsecondary administrators, vocational teachers, counselors, vocational teacher education agencies, educational service units, local Advisory Councils for Vocational Education and the Nebraska Legislature. It was the purpose of the Council to address all individuals and agencies that were in a position to exert an intluence upon vocational education in the state.

2. ACTIONS TAKEN AS A RESULT OF THE PREVIOUS EVALUATION

Part IiI of the 1971-72 State Plan for Vocational Education [7] refers to recommendations of the Advisory Council in six different places. Recommendations made by the Council have been valuable in establishing statewide priority areas for marshalling the state's resources for vocational education.

The Advisory Council has generated an awareness for priority needs by identifying the needs and formulating recommendations in the evaluation. This is the reason why overall priorities have been designated for the 1971 report.

Recommendations in which greater accomplishment was achieved are:

a. State master plan for postsecondary vocational technical education was listed as Goal IV on the 1970 Evaluation Report.[3] A compromise plan was enacted in the 1971 Legislature.[1]

b. A significant accomplishment was made in the inservice preparation of teachers for the disadvantaged and handicapped through summer work shops which were specifically designed for that purpose. Other summer inservice activities, particularly in the Adult Areas, were helpful in program implementation.

c. Overall growth expansion of vocational education statewide showed a significant accomplishment in spite of restrictions in professional staff, imposed by the Governor and the Legislature.

d. The 1970 Evaluation Report[3] recommended a Statewide Master Plan for Guidance and Counseling. During the last few months of fiscal 1971, a series of meetings was scheduled for the purpose of developing a State Guidance Master Plan. A plan is now in existence and is undergoing refinement. Other state resources were focused upon strengthening of occupational counseling. The problem was pursued by the Division of Vocational Education throughout the year.

The Exemplary Projects funded in the state were focused upon occupational orientation or strongly related areas. Vocational research projects funded were also directed toward the problem in varying degrees.

e. The staff of the Division of Vocational Education, through the special direction of the Assistant Commissioner, accepted Council recommendations as priorities during the year's activities. The leadership and manpower resources of the Vocational Division were specifically directed to establishment and implementation of new aspects of the Act plus growth and expansion of the ongoing program. This also included interpreting specific Council recommendations as applicable to local schools.

f. The supply of well-trained vocational teachers was identified as a high priority in the previous report. Even though no appreciable increase in the supply of teachers was noted, there were several accomplishments during the year to strengthen this segment. Research proposals were funded to Industrial, Distributive, and Business and Office Teacher Education Departments. In addition, the State Plan for Educational Professions Development has been prepared and approved, supplementing all areas of Occupational Teacher Education.

The State TTT Committee Title IV has included the need for occupational teachers in their state plan as documented from the Council.

3. FACTORS INFLUENCING SUCCESS OR FAILURE OF RECOMMENDATIONS

The involvement and dissemination activities of the Council and its staff were helpful in achieving a maximum impact from the Evaluation Report.

a. A series of meetings was held with the groups and agencies directly addressed in the report; such as, the Division of Vocational Education, teacher education agencies, educational service units, and the postsecondary technical colleges.

b. Two special news conferences were held during the year with specially prepared news releases which amplified recommendations. This activity was focused upon guidance counselors and local administrators of vocational education.

c. The Council established a lobbyist for the Nebraska Legislature. This is the first official legislative voice that vocational education has had. The lobbyist was coordinated with the State Board, the Nebraska Association of Technical Colleges (NATCO), the Nebraska Council on Occupational Teacher Education, and the State School Boards Association in supporting legislation which affected vocational education in the state.

d. Additional follow through of Council recommendations has been assured by Council representation on other various committees. The Council has had direct input into the following agencies or committees which have some influence on implementations of Council evaluative recommendations: Nebraska Council for Training of Teachers of Teachers (TTT), Higher Education Facilities Commission, Education Professions (EPD), and development of the State Plan.

e. Without question, implementation of Council recommendations to a great extent is due to the efficient communication between the Council and the staff of the Division of Vocational Education. The relationship has evolved into a greater statewide concern and desire for vocational education.

f. The Nebraska Council was represented at all of the various state, regional, and national conferences which were conducted for Council orientation and indoctrination. Another State Council was visited and four members of the Nebraska Council participated in the Regional Fact Finding Conference called by the Secretary of Health, Education and Welfare.

STATE PRIORITY NO. 3 — GOAL IV: IMPROVING THE IMAGE OF VOCATIONAL EDUCATION

1. HOW VOCATIONAL EDUCATION IS VIEWED

A priority statewide concern should be to improve the image and extend education to more students. The concept must be presented that vocational education is not designed for someone else's children. Vocational education is not something which can be obtained only at a specialized school nor is vocational education a terminal experience since education is a life-long process.

VOCATIONAL EDUCATION SHOULD BE VIEWED AS AN INTEGRAL PART OF THE MODERN COMPREHENSIVE HIGH SCHOOL, DESIGNED TO MEET THE NEEDS OF YOUTH IN A TECHNICAL AND CHANGING SOCIETY. STUDENTS SHOULD HAVE THE PRIVILEGE OF MOVING INTO AND OUT OF OCCUPATIONAL PROGRAMS AND OF SELECTING MIXTURES OF VOCATIONAL AND ACADEMIC COURSES.

SCHOOLS HAVE THE RESPONSIBILITY TO RESEARCH THE DEMOGRAPHIC MIGRATION PATTERNS OF YOUTH AND MEET THE OCCUPATIONAL NEEDS OF THOSE THAT STAY IN THE COMMUNITY AND THOSE THAT MIGRATE TO URBAN CENTERS FOR EMPLOYMENT. The students that wish further intensity and depth of instruction after high school should have the opportunity without restriction to attend public post-high school programs to prepare for employment at their highest potential.

The attitude that the only good education is the academic, college prep education must change. Opportunities for future employment are increasing for the vocationally and technically trained and decreasing for the unskilled. The Nebraska Advisory Council for Vocational Education is calling for an increase in educational emphasis **THE FINANCIAL SUPPORT FOR THE EDUCATION OF THE DECIDED MAJORITY SHOULD BE PROPORTIONAL TO THAT GIVEN TO THE 50 PERCENT THAT PURSUE THE BACCALAUREATE DEGREE AND THE 20 PERCENT THAT EVENTUALLY REACH THAT EDUCATIONAL LEVEL.**

It has been the inherent privilege of the youth in America to be born into a society which believed that all should have an opportunity for an education, an education which would provide them with tools of understanding so that they might make the greatest possible individual growth. The tools of understanding are all-encompassing; and the occupational decision reached by the individual, regardless of the topic, is based on the quality of his tools.

The goals of all educational institutions provide statements relative to "economic efficiency" and "vocational interests." The problem becomes one of putting the philosophy into practice. Those persons who have had the opportunity to work with a young person who is making decisions relative to his vocational future know this youth cannot choose what he does not know, and many of the educational opportunities and the resulting vocational choices are not known to us. Wise decision-making requires accurate information.

Information alone is not enough. Knowledge and acceptance of one's own abilities, aptitudes, interests, values, feelings, fears, likes, and dislikes are also essential.

It then becomes obvious that knowledge of vocational education experiences and vocational choice can be effectively applied only when the individual knows something about himself. It is equally obvious that knowledge of oneself can be effectively applied to the choice of an educational experience or vocational choice only when one knows something about the area. Either without the other is incomplete.

Thus, it can be concluded that if the maximum potential of our youth is to be reached, opportunities must be provided for them to receive factual information regarding all types of educational opportuntities as they relate to the world of work.

2. EDUCATIONAL CAREER DEVELOPMENT

THE CONCEPT OF EDUCATIONAL CAREER DEVELOPMENT SUGGESTS THAT VOCATIONAL EDUCATION MUST BECOME A PART OF THE EDUCATIONAL EXPERIENCE OF ALL PEOPLE. IN NEBRASKA, ABOUT 35 PERCENT (APPENDIX A) OF THE SECONDARY SCHOOL POPULATION IS BEING SERVED BY SPECIFIC OCCUPATIONAL SKILLS TRAINING IN TERMS OF INDIVIDUAL NEEDS, ALL STUDENTS, WHETHER IN GENERAL EDUCATION, VOCATIONAL, OR IN COLLEGE PREP CURRICULA, NEED SALABLE JOB SKILLS.

Vocational education can provide the framework for the career education system that will:

a. Introduce the elementary school child to the world of careers and the dignity of work

b. Provide exploration, guidance and counseling for career choices throughout elementary and secondary education

c. Provide specific skills training, job clusters skill, or pre-technical education at the secondary level

d. Provide more technical education at the secondary and postsecondary levels

e. Provide upgrading and retraining opportunities throughout adulthood

3. VOCATIONAL EDUCATION FOR DISADVANTAGED STUDENTS

If vocational education is to serve as a means for expanding opportunities for the disadvantaged

members of our society, the image must be maintained at the highest possible level. Image cannot be improved by setting restrictive limitations for entry into training as this would only exclude those with the greatest need. Nor can image be enhanced by administratively grouping the disadvantaged students into a proverbial "dumping ground."

VOCATIONAL IMAGE CAN BE IMPROVED BY DEVELOPING THE FLEXIBILITY FEATURES OF VOCATIONAL EDUCATION TO SPECIFICALLY CHALLENGE ALL LEVELS OF STUDENTS. THE ULTIMATE OBJECTIVE IS TO ASSIST THE DISADVANTAGED STUDENTS IN MAKING THEIR WAY IN THE MAINSTREAM OF AMERICAN LIFE, AND THIS CAN BEST BE ACCOMPLISHED BY KEEPING THEM IN THE MAINSTREAM OF OUR EDUCATIONAL SYSTEM. The Federal Register, Section 102.6 c [8] states, "To the extent feasible, disadvantaged or handicapped persons shall be enrolled in vocational programs designed for persons without their handicapping condition. Educational services required to enable them to benefit from such programs may take the form of modifications for such programs or of supplementary special educational services."

4. IMPROVING THE IMAGE OF VOCATIONAL EDUCATION

THE COUNCIL RECOMMENDS THAT ALL PERSONS IN EDUCATION FROM THE STATE BOARD TO THE LOCAL TEACHER SHOULD STRIVE TO FURTHER THE IMAGE OF VOCATIONAL EDUCATION. ACQUIRING A JOB SKILL SHOULD HAVE EQUAL PRESTIGE WITH THE ACADEMIC REQUIREMENTS FOR STUDENTS. POSTSECONDARY OPPORTUNITIES FOR CONTINUING VOCATIONAL EDUCATION SHOULD BE STRESSED AND FINANCIALLY SUPPORTED WITH EMPHASIS EQUAL TO THAT GIVEN TO HIGHER EDUCATION. IT IS THE COUNCIL'S CONCERN THAT EVERY NEBRASKAN BE EDUCATED TO HIS HIGHEST POTENTIAL. Issues that may inhibit fulfillment of that objective have been a priority of this evaluation.

The Council has reason to believe that the image factor in the past may have prevented some students from enrolling in vocational programs. One of the major concerns of this evaluation is to enhance the image by upgrading the educational quality of vocational programs and minimizing influences that may have nurtured such a negative concept. The Council is confident that the image can be improved. All segments of our society that have a potential to exert a positive influence are being solicited toward that end.

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APPENDIX A

ENROLLMENTS IN VOCATIONAL TECHINICAL EDUCATION
COMPARISON OF 1964, 68, 69, 70, and 71 DATA

* ACTUAL ENROLLMENTS

	1964	1968	1969	1970	1971**
AGRICULTURE	6,757	6,762	7,330	8,013	8,612
Secondary	4,919	5,005	5,335	5,712	6,002
Postsecondary	–	232	180	318	538
Adult	1,838	1,496	1,763	1,983	2,072
Special Needs	–	29*	52*	2,439*	2,125*
DISTRIBUTIVE	2,166	4,270	2,677	2,578	3,163
Secondary	840	1,347	1,558	1,990	2,635
Postsecondary	–	23	37	136	168
Adult	1,326	2,900	1,082	452	1,360
Special Needs	–	–	–	179*	110*
DIV. OCCUPATIONS	–	321	256	–	224
Secondary	–	211	–	–	219
Special Needs	–	110*	256*	–	5*
HEALTH OCCUPATIONS	395	1,517	1,734	2,425	2,442
Secondary	–	–	75	121	131
Postsecondary	298	725	794	949	1,294
Adult	97	792	865	1,355	1,017
HOME ECONOMICS	16,662	18,044	19,186	24,010	27,562
Secondary	8,564	11,260	13,499	17,848	19,412
Postsecondary	–	–	–	–	–
Adult	8,098	6,784	5,687	6,162	7,150
Special Needs	–	–	–	3,566*	1,558*
OFFICE OCCUPATIONS	–	6,086	6,913	7,140	7,152
Secondary	–	4,505	5,081	5,283	5,045
Postsecondary	–	302	387	406	837
Adult	–	1,279	1,392	1,451	1,270
Special Needs	–	–	53*	256*	620*
TECHNICAL	606	970	1,256	1,174	1,623
Secondary	116	–	12	–	–
Postsecondary	476	970	1,013	1,174	584
Adult	14	–	231	–	1,039
TRADES & IND.	5,146	9,193	10,997	14,654	14,651
Secondary	43	2,023	2,453	3,292	3,774
Postsecondary	–	327	376	1,000	1,815
Adult	5,103	6,407	7,707	10,362	9,062
Special Needs	–	436*	461*	487*	871*
COOPERATIVE (Part G)	–	–	–	155	675
Secondary	–	–	–	150	659
Postsecondary	–	–	–	5	16
HERO	–	–	–	589	337
Secondary	–	–	–	262	185
Adult	–	–	–	327	152
Special Needs	–	–	–	299*	169*
SPECIAL NEEDS	–	–	–	1,435	3,491
Disadvantaged	–	–	–	1,140	2,461
Handicapped	–	–	–	295	1,030
Percentage of Secondary	15%	23%	26%	31.8%	35%
TOTALS	31,696	47,163	50,349	60,583	67,614
TOTAL SECONDARY(Enrollment 9-12)	98,156	107,223	109,091	108,673	109,062
SECONDARY Voc. Enrollment	14,446	24,351	28,013	34,508	38,062
POSTSECONDARY	774	2,579	2,787	3,983	5,007
ADULT	16,476	19,658	18,727	22,092	21.114
SPECIAL NEEDS	–	575*	822*	7,246*	7,078*

*Included in secondary and postsecondary enrollments
**Tentative

APPENDIX B

NEBRASKA VOCATIONAL EDUCATION PROFESSIONAL STAFF INVENTORY

Occupational Area		7/1/70 – 6/30/71			1971-72 Year			1971-72 Year
		Degrees awarded No. completing certification requirements			No. of graduates teaching or will teach this next year			No. of graduates not teaching this next year
		Bac.	Masters	Doct.	Instate	Outstate	Unknown	
	Voc.	40	10	2	28	2	2	20
02. Distributive	Voc.	9	5	2	7	2	5	2
	*Voc. Rel.	12	0	0	7	2	0	3
07. Health Occup.		none	none	none	none	none	none	none
09.01 Home Ec	Voc. Cons.	159	12	0	48	6	103	14
	Voc. Hero	none	none	none	none	none	none	none
14. Office Occup	Voc.	93	23	5	66	21	24	10
	* Voc. Rel	52	1	0	18	6	19	10
16. Technical	Voc.	3	0	0	2	1	0	0
	* Voc. Rel	none	none	none	none	none	none	none
17. Trade & Ind.	Voc.	20	0	0	18	1	1	1
	* Voc. Rel.	62	2	0	33	16	1	12
Guid. & Counseling		0	105	2	35	9	62	1
Cooperative		21	5	2	14	3	6	5
Disadvantaged & Handicapped		29	47	0	50	16	10	

*Voc. Rel. – means vocationally related in the occupations area but not qualified for certification or approval in a vocational reimbursed program.

NOTE: Information concerning unfilled vacancies of vocational teachers was not readily available because vacancies on this date are usually filled by provisional teachers who promise to meet the qualifications within three years.

Follow-up for Placement

Several programs maintain contacts with most schools in the State and assist with placement. Also keep abreast of needs for staff and inservice training programs through the State Department of Education and an inservice staff member

Most programs at most colleges and universities reported they used their placement service for this purpose. However, they felt it was difficult to secure accurate records of placement and admitted they did not know but were interested in knowing.

Several said, "We just don't keep these kinds of records, and if we did it would be difficult as students seldom let us know where they go."

Recruitment Activities

Use of special brochures, college staff at career days, and other career programs

Recommendations from vocational technical colleges

Assist with recruitment for technical staff

Hold a vocational tea once each year

Inservice Activities

Workshops – coordinating techniques – held during summers

Evening classes – organization and administration of vocational education

Faculty visits to new teachers and special visits to any school that requests assistance

Special summer conferences and workshops provided for many vocational teachers

APPENDIX C
EFFECTIVENESS EVALUATION OF VOCATIONAL EDUCATION

		Weighted Values								
		Strong						Weak		Freq.
		+ 3	+ 2	+1	0	-1	- 2	- 3	Value	Count
MANUAL JOB SKILLS	I	0	20	16	0	-17	-56	-12	-49	98
Skills in using or operating tools,	II	0	12	25	0	-15	- 2	- 6	14	93
equipment, materials, etc., in	III	18	64	41	0	-1	- 2	- 3	117	91
your firm	IV	132	38	14	0	0	0	- 3	181	97
JOB PRACTICAL KNOWLEDGE	I	0	16	18	0	-28	-38	- 6	-38	103
Practical everyday knowledge of	II	0	6	24	0	-18	- 6	0	6	96
work processes, methods, pro-	III	15	58	33	0	-10	- 8	- 3	85	98
cedures, tools, etc.	IV	114	40	12	0	-1	- 2	-12	151	97
JOB THEORETICAL KNOWLEDGE	I	0	10	10	0	-6	-58	-21	-65	100
Knowledge of basic principles	II	0	4	38	0	-6	- 8	- 3	25	99
relating theory to actual prac-	III	6	30	42	0	-13	- 4	- 3	58	91
tice in problem solving	IV	33	42	16	0	-2	- 6	- 3	80	101
MATHEMATICAL SKILLS	I	0	0	7	0	-6	-54	-42	-95	103
Ability to use arithmetic or high-	II	0	12	15	0	-11	-32	0	-16	99
er mathematics to solve problems	III	6	42	34	0	-9	- 4	0	69	103
in daily work routine	IV	24	54	21	0	-5	-40	0	54	103
COMMUNICATIVE SKILLS	I	0	2	2	0	-7	-58	-21	-52	103
Skill in speaking, writing, draft-	II	0	8	14	0	-10	-14	0	- 2	98
ing, sketching, etc., to	III	6	50	20	0	-7	-12	0	57	102
communicate ideas	IV	51	30	19	0	-5	0	0	96	100
READING & INTERPRETATIVE SKILLS	I	0	6	18	0	-22	-22	-42	-62	101
Skills in keeping records, making	II	18	16	25	0	-15	-18	- 3	23	102
out reports, and other types of	III	15	46	39	0	-5	-14	0	81	99
routine paper work	IV	78	62	22	0	-5	0	0	151	103
CLERICAL SKILLS	I	0	2	5	0	-8	-58	-27	-86	95
Skills in reading printed matter,	II	0	10	24	0	-7	-32	- 6	-11	97
blue prints, tables, diagrams,	III	18	22	34	0	-7	-24	- 6	37	103
instruction sheets, etc.	IV	33	18	37	0	-3	-10	- 3	72	97
PERSONAL RELATIONS	I	0	4	5	0	-5	-20	-15	-31	102
Skill in associating with people	II	0	14	12	0	-3	- 4	0	19	95
such as customer, co-workers,	III	3	28	16	0	-2	- 2	0	43	103
other tradesmen, etc.	IV	15	22	16	0	-2	0	0	51	100
SUPERVISORY SKILLS	I	0	8	11	0	-2	-34	-9	-26	103
Skill in supervising others, in-	II	0	12	12	0	-9	- 8	0	7	92
structing, directing, evaluating,	III	15	36	11	0	-4	- 4	0	54	103
planning, and organization	IV	30	44	12	0	-1	0	0	85	98
ATTITUDE TOWARD WORK	I	0	18	12	0	-16	-22	-9	-17	101
Behavior such as absenteeism, rule	II	0	10	15	0	-10	-20	- 3	- 8	103
violations, concern for quality	III	3	24	28	0	- 2	-10	- 3	28	103
work, cooperation, etc.	IV	24	36	27	0	- 3	-12	0	49	94
ATTITUDE TOWARD SAFETY	I	3	30	26	0	-12	-20	- 3	24	101
Knowledge of and practice of good	II	0	16	27	0	- 8	- 8	0	27	100
safety procedures in carrying out	III	9	62	41	0	- 2	- 2	0	108	98
job duties	IV	78	66	16	0	0	- 2	0	158	99
Response Total		249	570	912	1852	329	375	89		
Percentage of Total		5.7	13.0	20.8	42.5	7.5	8.5	2.0		

Definitions:

Group I Less than high school graduate with no vocational education
Group II High school graduate without vocational education
Group III High school graduate with vocational education
Group IV Postsecondary vocational education

VT 017 621
FIRST BIENNIAL REPORT OF THE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION IN TEXAS TO MEMBERS OF THE TEXAS LEGISLATURE.

TEXAS STATE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION, AUSTIN.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
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DESCRIPTORS - *ANNUAL REPORTS; *ADVISORY COMMITTEES; *VOCATIONAL EDUCATION; DOCUMENTATION
IDENTIFIERS - *BIENNIAL REPORTS; TEXAS

ABSTRACT - DIVIDED INTO THREE MAJOR PARTS, THIS REPORT BY THE TEXAS ADVISORY COUNCIL ON VOCATIONAL EDUCATION SUMMARIZES THE ACTIVITIES, PROCEEDINGS, AND ACHIEVEMENTS OF THE GROUP OVER THE YEARS, 1969 AND 1970. CONTENTS OF THE TEXT BY SECTIONS ARE: (1) REVIEW OF COUNCIL ACTIVITIES, (2) REVIEW OF COUNCIL ACTIVITIES-RELATED TO SENATE BILL 261, AND (3) FIRST ANNUAL REPORT. SUPPLEMENTARY ATTACHMENTS INCLUDE: (1) THE COUNCIL'S FIRST ANNUAL REPORT, SUBMITTED SEPTEMBER, 1970, (2) A BROCHURE ON THE COUNCIL'S ORGANIZATIONAL AND FUNCTIONAL STRUCTURE, DATED MAY, 1970, AND (3) PROCEEDINGS OF THE GOVERNOR'S CONFERENCE ON VOCATIONAL EDUCATION, MARCH, 1970. (SN)

VT 017 621

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FIRST BIENNIAL REPORT

OF THE ADVISORY COUNCIL FOR TECHNICAL-VOCATIONAL EDUCATION IN TEXAS

TO MEMBERS OF THE TEXAS LEGISLATURE

December 1, 1970

VT017621

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THE ADVISORY COUNCIL FOR TECHNICAL – VOCATIONAL EDUCATION
IN TEXAS
(Advisory Council to the State Board of Education)
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December 1, 1970

TO MEMBERS OF THE TEXAS LEGISLATURE:

The First Biennial Report of the Advisory Council for Technical-Vocational Education in Texas, in accordance with Section 15 of Senate Bill 261, enacted by the Sixty-First Legislature, Regular Session, is transmitted herewith.

Study by the Council of Senate Bill 261 has revealed that the statute is a profound document, setting forth goals and directives that will result in an education system fully capable of meeting the needs of ALL citizens. A further finding of the Council is that considerable time will be required to fulfill the legislative intent of this statute.

Members of the Advisory Council and its staff are available to the Legislature as resource persons within responsibilities outlined in Senate Bill 261.

On behalf of the Council, may I express appreciation to all of you for your support and able assistance through the specific guidelines set out in Senate Bill 261.

Respectfully submitted,

E. D. Redding
Chairman

EDR:nl

Attachments to the Report
No. 1 - First Annual Report, The Advisory Council for Technical-Vocational Education in Texas, September, 1970
No. 2 - Brochure of The Advisory Council for Technical-Vocational Education in Texas
No. 3 - Proceedings of the Governor's Conference on Technical-Vocational Education

PURPOSE: "To establish a climate conducive to the development of technical, vocational, and manpower training in educational institutions in the State of Texas to meet the needs of industrial and economic development of the state."

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Attachment No. 2 - Brochure of the Advisory Council for Technical-Vocational Education in Texas, May 1970

Attachment No. 3 - Proceedings of the Governor's Conference on Technical-Vocational Education in Texas, March 1970

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F O R E W O R D

The Advisory Council for Technical-Vocational Education in Texas has been aware continuously of the general purpose of the Council stated in Section 3 of Senate Bill 261, "to cause to be established a climate conducive to the development of technical, vocational and manpower training in educational institutions in the State of Texas to meet the needs of industrial and economic development of the State." This statement of purpose is a part of the letterhead of the Council. A reproduction of Senate Bill 261 is contained on pages 30-37 of Attachment 2.

After the first full year of operation of the Council, it is evident to the Council that assignments outlined in Senate Bill 261 are very broad and the full discharge of these responsibilities will require considerable time for assessment and even longer for implementation.

When the Council began to examine its responsibilities, certain priorities were established: (1) education of the Council; (2) acceptance of the Council by citizens and educators; and (3) presentation of basic recommendations to the State Board for Vocational Education. It was necessary that (1) and (2) occur before serious attention could be given to (3) and others.

The Advisory Council has been encouraged by a climate of interest, concern and support as it has worked with state and local government agencies, groups, and individuals throughout the State. The legislation passed during the Sixty-First Legislative sessions is a testament to the support of the lawmakers of our state. The continued priority, visibility and dedicated support of the Governor of Texas has been most encouraging and helpful. The State Board of Education and staff under the direction of the Commissioner of Education have been responsive, and there is strong evidence that local boards of education and their administrative units are giving serious consideration to many concerns of the Council and citizens of the state in the area of technical-vocational education. The Council will be following these developments with interest.

An example of a school district taking steps in this direction is the Houston Independent School District. Their Board of Education adopted during its August 1970 meeting, "A Statement of Policy on Occupational Education in Houston", which will be most helpful to this local district administration in developing programs responsive to the needs of individuals and the community. The President of the Texas Federation of Women's Clubs has announced that a special concern during her administration will be technical-vocational education. These two examples are an indication of the favorable climate developing within the state.

An indication of the concern of citizens of the state for technical-vocational education was the response to and support of the Governor's Conference on Technical-Vocational Education which was held earlier this year. The proceedings of this conference are included in this report as Attachment 3. Special attention is directed to the Introduction which gives information on those who participated in the Conference. Future plans of the Council call for fourteen regional "grass roots" hearings early in 1971, to provide citizens throughout the state the opportunity to present their views on technical-vocational education.

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The growth and development of technical-vocational education at the secondary level is evidenced by the increase in programs for 1970-71 which is twice any previous annual growth. Technical-vocational programs in the post-secondary institutions continue to expand at an annual rate of approximately 15%.

Texas is fortunate to have a fine education system evidenced by its accomplishments through the years. As Texas grows and existing industry changes, our education system is called on to support such changes. The Advisory Council has attempted to make realistic recommendations in Attachment 1 for changes to "bridge some gaps" in education for "living" and "making a living", and to make some adjustments to the entire education system.

The Council will be following with interest further developments and responses.

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PART I

REVIEW OF COUNCIL ACTIVITIES

The Advisory Council for Technical-Vocational Education in Texas was organized under the provisions of Public Law 90-576 during the early months of 1969 and held its first meeting March 4, 1969. The passage of Senate Bill 261 and the Governor's signature on April 22, 1969, brought into being a state statute establishing the Advisory Council as the first in the nation secured by state law. On September 1, 1969, the effective date of the legislation, the Advisory Council for Technical-Vocational Education in Texas was reconstituted under the provisions of Senate Bill 261, Acts of the Sixty-First Legislature, Regular Session.

After election of a Chairman, the Council organized into six committees. The organization and lines of communication charts were developed and approved by the Council on March 18, 1969. Your attention is called to the charts on pages 26 and 27 of Attachment 2. In the same publication, page 25, you will find a list of committees and membership as of May 1970.

The Steering Committee of the Council serves as the Executive Committee of the Council and was responsible for developing the Council staff. A Council Secretary was employed effective May 1, 1969. Two additional professional persons were subsequently employed and one additional secretary. The Council has employed part-time and temporary personnel as needed. In accordance with Senate Bill 261, the Council offices are provided by the Texas Education Agency

Rules and Regulations of the Advisory Council were developed and approved by the Council during the October 16, 1969, meeting and transmitted to the Secretary of State on October 27, 1969.

Meetings of the Council since organization have been as follows:

DATE	PLACE	SPECIAL ACTIVITIES
March 4, 1969	Austin, Texas	Address by Governor Preston Smith Elected Chairman Conducted Business
March 18, 1969	Austin, Texas Commodore Perry Hotel	Adopted Organization of Council Briefing by staff of Texas Education Agency Business Items
April 17, 1969	Austin, Texas Commodore Perry Hotel	Study of Council Functions Business Items
May 22, 1969	Austin, Texas Hearing Room Highway Department	Business Items Conducted Public Hearing on State Plan for Vocational Education in Texas
October 16, 1969	Austin, Texas Commodore Perry Hotel	Reports from Council Committees Presentations by Program Directors "Environmental Technology Program"

DATE	PLACE	SPECIAL ACTIVITIES
November 19-20, 1969	Corpus Christi (Del Mar College) Gary Job Corps Texas State Technical Institute, Waco Ft. Worth Public Schools Tarrant Co. Jr. College	A study tour of technical-vocational education in Texas Business Items
February 12, 1970	Austin, Texas Commodore Perry Hotel	Industrial & Economic Development Teacher Education in Texas Committee and Report Reviews
March 23-24, 1970	Austin, Texas Municipal Auditorium	Governor's Conference on Technical-Vocational Education . . A Public Forum
June 9-10, 1970	Houston, Texas Shamrock-Hilton Hotel and other points	A study tour including medical personnel needs, apprenticeship training, the Houston area economy, Lee College, the Texas Plan for Vocational Education
August 18, 1970	Austin, Texas Commodore Perry Hotel	Southwest Regional Educa-Development Laboratory Adult Education Presentation Organization of State CAMPS Preview - "The Future... My Destination" Final Action on First Annual Report
September 29-30, 1970	Dallas, Texas Adolphus Hotel and other points	Opportunities Industrialization Centers Dallas Area Economy Dallas Financial and Insurance Industry and Occupational Education Dallas Secondary and Post-Secondary Education Industrial Tour Private School Study Vocational Youth Report
November 10, 1970	Austin, Texas S. F. Austin Hotel	Vocational Youth Report Study of Report to Legislature Business Items

The Advisory Council is aware of many restrictive influences on the development of technical-vocational education in Texas. Heading the list is "attitude" of all citizens. Much of the problem of attitude is that of relating technical-vocational education to jobs, particularly on the part of some parents. Many parents think technical-vocational education is wonderful for "someone else's child."

The Council moved to secure support for production of a film on technical-vocational education entitled "The Future ... My Destination" which was funded by the Halliburton Educational Foundation and was premiered before the State Board of Education at its meeting on September 12, 1970. Several prints of the film were purchased, and they are heavily booked for the next several months. With utilization of the film throughout the state, it is hoped citizens will respond to the concluding point of the film, and "think about technical-vocational education". Several organizations and groups have pledged support in educating their members in this important aspect of our education system.

The ACTVE News, the newsletter of the Council began publication in May 1970 on a monthly basis and is presently mailed to fifteen hundred citizens representing many interests throughout the state. The newsletter reports on activities of the Council and highlights technical-vocational education activities from a variety of sources throughout the state.

The six committees of the Council meet periodically for study and work on matters within their assignment. The work of the committees is discharged by members and by assignments to the Council staff. For example, during the study and development of Recommendation II, pages 37-40, Attachment I, three Council members studied area technical-vocational school programs in four states.

The Council Chairman and Executive Director have participated in three biannual joint conferences of National and State Advisory Councils on Vocational Education, benefiting from the mutual exchanges.

PART II

REVIEW OF COUNCIL ACTIVITIES
RELATED TO SENATE BILL 261

Section 7(a)

Recommend and evaluate the role and scope of secondary institutions, public junior colleges, community colleges, technical training institutes, and public senior colleges and universities in a comprehensive plan for developing manpower education and training in the State of Texas;

The responsibilities outlined in this section have not received indepth study by the Council to date. Some factors influencing this area of responsibility are as follows:

1. A comprehensive system of technical-vocational education in Texas has not yet reached maturity. For example:

   a. Although substantive progress has been made in the last five years in providing vocational education at the secondary level in gainful employment areas, the Council in its Recommendation I, pages 36 and 37, Attachment 1 suggests that the entire education system in Texas be adjusted toward education for "living" and "making a living" as equal partners.

   b. Several junior colleges have given serious attention to technical-vocational education needs of the areas they serve. However, of the forty junior colleges in the state, nine enroll 65% of all the technical-vocational students in the junior colleges.

   c. The Texas State Technical Institutes have been in operation less than five years with substantial program offerings having taken place in the past two years.

   d. Adult education programs in Texas have developed to a minimum level in response to federal programs. However, neither a commitment to adult education needs nor the funds have been forthcoming from state government. The full development of an adult education program is imperative to correct many deficiencies in a comprehensive system of technical-vocational education. For example, many adults function educationally below the eighth grade level which means they cannot effectively participate in occupational training programs. Many remain in entry level and dead end jobs for years because of a lack of education and marketable skills. Refer to page 14 and 15, Attachment 1, for additional information.

2. Information and data necessary for planning a comprehensive program are inadequate, and the Advisory Council has suggested action in Recommendation VII, page 45 of Attachment 1 to the State Board of Education to correct this deficiency.

3. Education has not identified job market areas to suit their needs. Several community colleges are making considerable progress through program development officers on their staffs. However, these probably represent less than 40% of the community colleges, and such information is not developed

to give a statewide picture. There is a need for a coordinated statewide study to determine occupational preparation required by employers as a guide to effective program planning.

4. A review of programs in post secondary institutions indicates there are several offerings which should be presented at the secondary level. However, in many cases, the courses have not been developed at the secondary level, and the post secondary institution is responding to a community need. There must be close integration of curriculum between the secondary and post secondary levels. This would not necessarily alleviate the necessity of offering lower division courses at the community college, but provision would be made for advanced programs for student clientele. Basically the 13-14 year level programs will assume their proper role, when our 11-12 year programs fulfill their role, when kindergarten through the 10th year functions are realized as they relate to "education for making a living".

5. Public post secondary program offerings in Texas during 1969-70 totaled ninety different programs. An analysis of these offerings reveals the following information from which several conclusions can be drawn:
   - 67% of all programs were offered in 17 institutions with 2,000 or more total student enrollment.
   - 65% of technical-vocational student enrollments were in 9 institutions.
   - 23 institutions with less than 2,000 total student enrollment per institution offered only 33% of the technical-vocational education programs in post secondary institutions. These 23 institutions offered 41 of the 90 programs offered in the state. However, 21 of the 41 programs were single offerings, usually peculiar to the geographic area served. Also 65% of programs offered were concentrated in ten program areas which are listed in rank order --- Data Processing; Drafting and Design; Accounting and Computing; Licensed Vocational Nurse; Electronics; Stenographic and General Secretary; General Office Clerical; Auto Mechanics; Mid-Management; and Welding.

6. It is evident from the above analysis that comprehensiveness of program offerings is a critical problem in 23 of the 40 junior colleges. As technical-vocational education expands in our post secondary institutions, approval of new programs must be based upon job market needs with consideration given to local, regional and state requirements.

7. The roles our institutions play will vary with local and state needs, development of the system, maturity and needs of students, and expansion of occupational education at all levels. Coordinated activities between all institutions must be strengthened and program approval exercised with discretion.

The responsibilities outlined in this section will require the continuous study of the Council to make necessary and realistic adjustments as needs change and as our education system matures in response to these needs. The Council is addressing itself to the broader implications of these responsibilities in Recommendations I and II of Attachment 1, pages 35 through 40.

PART II - Section 7(b)

Recommend the appropriate subjects to be taught at each level of training and in each of the above types of institutions;

The Council defines "subjects" as programs of instruction. Examples of these are: Auto Mechanics; Ornamental Horticulture; Data Processing; Machine Shop; Cosmetology; Dietitian Aid; Child Care Aide; and Printing.

The subject offerings of the above types of institutions will vary with the needs of individuals, state and local job markets, and available funds for program expansion. New programs and services that resulted from federal legislation are included in the State Plan and are summarized in Item 2, page 23, Attachment 1.

The Council is concerned that professional education leadership be competent in determining approved subjects to be taught in keeping with the needs of individuals and the job markets. It is necessary that the school administrator understand the economy of the community, the workings of the job market, the role of education in the job market, and how these are related to the needs of individuals. The Council in Recommendation V, page 43, Attachment 1, has made recommendations designed to provide knowledge and experience for administrators.

In Recommendation I, page 35, Attachment 1, the Council has suggested to the State Board of Education that the education system of the state be adjusted to provide a chronologically integrated system responsive to individual needs regardless of the age or level of the individual.

PART II - Section 7(c)

Recommend a state plan designating the method and the criteria to be utilized in establishing area technical schools which will be consistent with the Vocational Educational Act of 1963, as amended, the Manpower Development and Training Act of 1962, as amended, and other federal statutes;

The Advisory Council has spent considerable time and effort in reviewing present area vocational school activities, including a questionnaire study of school districts operating area vocational schools. Members of the Council have studied programs in other states for further ideas.

In Attachment I, on pages 37-40 information is given along with Recommendation II, outlining a proposed system of Area Technical-Vocational School Jurisdictions. This recommendation is under consideration by the State Board of Vocational Education. If adopted, as recommended, legislation and appropriations would be required to implement it.

The recommendation, if implemented, could, in a very positive manner, affect the total effort in technical-vocational education in the state, especially in the areas of redirection, quality, quantity and comprehensiveness. The level of technology is such that this or a similar system of technical-vocational education for Texas is imperative.

PART II - Section 7(d)

Recommend and evaluate a list of courses offered by these types of institutions eligible to be funded by the Legislature or through the allocation of federal funds. These courses shall be freely transferable among the public institutions in the State of Texas, with credit for such courses to be given on the same basis as if they had been taken at the receiving institution;

The list of courses referred to in this section is prepared by the Associate Commissioner for Occupational Education and Technology in accordance with Section 18(d), Senate Bill 261.

The free transfer of such courses among public institutions in Texas requires additional study and investigation on the part of the Council.

PART II - Section 7(e)

Recommend to the Governor and the Legislature methods of funding existing programs and propose methods for funding new programs;

One of the first concerns of the Council in this area was to study the real and total costs of technical-vocational education in Texas. A contract was initiated for study of costs at the post secondary level. The results of the study are being used as a guide or base upon which to determine levels of recommended appropriations. The Council study encountered difficulty in determining costs because of inadequate and inconsistent records. The Council expects to maintain the data base established in the initial study; and the Council in part two of Recommendation XI, page 49, Attachment 1, has asked the Texas Education Agency to devise a uniform cost accounting system which will display all elements of cost in technical-vocational education.

The Council is concerned that funding of technical-vocational education is inadequate and has spoken to this need in part one of Recommendation XI.

At the secondary level, substantial progress has been made in redirecting programs, expansion of several programs and development of new programs in keeping with job market needs. In Attachment 1, page 10-12, trends in vocational education are discussed; and on pages 13-16 there is information on groups to be served. There is an urgent need to strengthen the area schools throughout the state to make technical-vocational education readily available, of high quality and comprehensive. The recommendations are contained in Attachment I, pages 37-40, Recommendation II.

The Advisory Council did a study on the "Present Patterns of Source, Management and Application of Public Funds used in Technical-Vocational Education and Directly Related Activities in Texas". The study confirmed elements of duplication and competition with strong evidence of proliferated management structure at all levels, pages 5-7, Attachment I.

Recommendation III, page 41, Attachment I, makes provisions for financial support for maximum utilization of technical-vocational facilities. State funds are required in Recommendation IV, page 42, Attachment I, for training and economic development; to develop professional education leadership, Recommendation V, page 43, Attachment 1; and the development of an electronic data system to provide appropriate data for education requirements and projections, Recommendations VII, page 45, Attachment 1.

PART II - Section 7(f)

Suggest and evaluate pilot projects and present recommendations to the Governor and the Legislature for implementing cooperative programs among the several types of institutions named hereinabove, which will provide a more effective and efficient method of supplying business and industry with trained manpower;

The responsibility outlined in this section is very broad and the Advisory Council has made several recommendations which should contribute to the supply of trained manpower to business and industry in the state.

Recommendation II on pages 37 through 40 of Attachment 1 on area technical-vocational school jurisdictions, when fully financed and implemented, should meet training needs in most of the state. The plan envisions the utilization of total public and private resources of the jurisdiction in meeting the technical-vocational needs of individuals and employers.

In Recommendation IV on page 42 of Attachment 1, three important suggestions are offered to make training resources responsive to economic development needs of the state. Cooperation between appropriate state agencies and groups is outlined and encouraged. Implementation of this recommendation would involve the cooperation and support of public education institutions at all levels as well as private education and other training resources.

In Recommendation VIII on page 46 of Attachment 1, the State Board of Vocational Education and the Coordinating Board, Texas College and University System, are encouraged to develop consortium relationships between institutions with vocational teacher preparation programs to better serve this need. Presently, teacher preparation programs are conducted in many institutions along traditional lines with a minimum of coordination. There are areas of commonality which can be more effectively served by much closer coordination. Institutions are also encouraged to expand internship and cooperative relationships with employers in both pre-service and in-service teacher preparation activities. There is a critical need for recognizing appropriate non-teaching work experience in determining salary schedules and credit toward degrees for teachers of approved technical and occupational skill areas.

PART II - Section 7(g)

Recommend the establishment of the responsibility of public schools, public junior colleges, community colleges, technical training institutes, and public senior colleges and universities in adult basic education, adult technical education, and adult vocational education.

Adults are defined for the purpose of this section as persons 16 years of age or older who are not enrolled in public school education.

The Texas Education Agency is administering a substantial adult basic education program, supported by rather static levels of federal funding without the aid of state funds. Local school districts have a very limited commitment to serve the adult needs. Refer to pages 14 and 15, Attachment 1, for information on adult education.

The Texas Department of Corrections (TDC) reports only 2% of the individuals in the state prison system have completed high school and the average educational achievement is 6.3 years. The TDC is operating a very comprehensive educational program for adults from the first grade through college. As soon as the inmate acquires sufficient basic education, major emphasis is placed on occupational preparation. This information supports studies indicating that persons with less than an eighth grade education find it difficult to function in our present society.

The institutions listed in Section 7(g) conduct adult education programs throughout the state, but generally within their mode of operation and with limited or nonexistent outside funding. There is an urgent need for state support for a viable adult education program at all levels to serve the vast and increasing adult education needs of the state. The continued health of the economy and society depend upon such a program.

The Texas Education Agency administers a program to establish the High School General Educational Development (HS GED) of individuals which is useful for purposes of employment and may be used for entrance into education programs beyond the high school level.

A variety of programs have been initiated for many adults under provisions of the Manpower Development and Training Act (MDTA) of 1962, as amended. The MDTA provides for training in addition to a large number of manpower services essential for the training and employment of these adults. Legislation is pending before the Congress to expand and strengthen these programs of remediation.

The Advisory Council made several recommendations in Attachment 1 designed to establish the responsibility and commitment for adult education firmly with the public education institutions of the state. For reference, see Recommendations I, pages 35-36; II, pages 37-40; III, page 41; IV page 42; XI, page 49, and there are implications for adult education in other recommendations of the Council.

Adult technical-vocational education will be a special subject of concern in the Council's regional hearings scheduled for January and February 1971 throughout the state.

PART II - Section 7 (h)

Recommend, encourage and evaluate cooperative programs between educational institutions and industry, and, with the assistance of industry, assist in the development of new curricula and institutional materials as may be required for new and emerging occupational categories as may be prescribed by industry;

In March, 1970, the Council co-sponsored with the support of the Governor and 18 business firms and organizations and approximately 40 exhibitors, the Governor's Conference on Technical-Vocational Education. See page 3, Attachment 1.

Industry-education cooperation is evidenced in the Texas Education Agency's Environmental Technology program in cooperation with the Construction Industry Council for Manpower, Education, and Research. The Council has cooperated with and supported this program.

In recognition of the need for a statewide comprehensive technical-vocational curriculum and materials system to serve technical-vocational education at all levels, the Council recommends such a system with provisions for the involvement of industry. See Recommendation IX, page 47, Attachment 1.

The Council is aware of the necessary involvement of business and industry in an effective system of placement and follow-up. Such a system is outlined in Recommendation X, page 48, Attachment 1.

The Council is conscious of the relation between industry and education for economic development, and has in Recommendation IV, page 42, Attachment 1, outlined needs in this important area.

Indicative of industry-education cooperation is the rapid growth of cooperative training programs in technical-vocational education. Through this arrangement, the facilities of employers in the community are utilized instead of duplicating these facilities in the school.

A staff analysis of Texas Education Agency's data indicates that public school cooperative vocational education programs have increased from 1,065 units in 1969-70 to 1,370 units in 1970-71, an increase of 306 units or 29%. The overall increase in total programs in vocational education during this period is 20%. Progress is being made in industry-education cooperation.

The Council will continue to seek opportunities for establishing and developing meaningful industry-education relationships for the mutual benefits of all citizens.

PART II - Section 7(i)

Provide up-to-date statistical data on employment opportunities in the Texas economy to persons trained in these institutions through cooperation with the Texas Employment Commission and other appropriate research agencies at both the state and national levels;

The Council has given considerable study to the rather complex and difficult job of providing up-to-date data on employment opportunities in Texas to persons trained in our institutions. The major problem lies in "interfacing" the broad Texas economy with the "grass roots" or local education effort. Training and employment data is collected by several agencies and groups for a variety of purposes, posing a problem in relating employment data to education planning or relating education programs to employment opportunities. There must be developed a "universal language" in this important area.

The Texas Employment Commission (TEC) has a comprehensive network of offices throughout the state offering extensive services in collecting employment data. There are several developments within this agency which offer considerable promise.

In addition to the TEC's present capability to provide information on employment opportunities in the State is the development of a matrix job forecasting system. The system will give predictive information useful in establishing various types and levels of programs for job entry. Secondly is the Job Bank which will be developed into a state and national daily display of available jobs with location and requirements. A third program is Employment Security Automated Reporting System (ESARS), a system of electronic monthly follow-up reporting of all activities in TEC offices across the State. In addition to report on job orders and placements all manpower development training is reported. In the future each of these three programs will be tied to a national system.

A state sponsored program which has promise in the area of up-to-date data on job opportunities is the Input-Output Study. This study will allow the state planners to approximate various reactions to changes in the industrial and/or economic make-up of the state.

The Texas Industrial Commission is expected to initiate training programs in response to needs of new and expanding industries. Information from this section of the Governor's Office will be very important in developing the overall training approach and maintenance of training. See Attachment 1, Recommendation IV, page 42.

The Council staff has held two meetings with state agencies to gain working knowledge of the availability of various statistical data for information and planning purposes. Each agency continues development of their electronic data processing systems.

There are a number of proposals under consideration by the Texas Education Agency, Division of Occupational Education Research and Development having to do with data gathering, transmission and storage. The Council is exploring methods of gathering employment data for Texas by Standard Metropolitan Statistical Areas giving existing employment, replacement needs, growth patterns, training program locations and outputs. This information would be for the use of those mentioned in this section of Senate Bill 261.

PART II - Section 7(i)

To help refine training supply information, and to respond to demand information from the economy, the Council has recommended that the State Board for Vocational Education initiate planning to implement a coordinated information retrieval system. See Attachment 1, Recommendation VII, page 45.

The State Board of Education on November 9, 1970, approved a proposal to initiate a statewide program at the post secondary level which will (1) provide information on occupations to prospective students; (2) provide an evaluation of programs and institutions, and (3) provide follow-up studies on students who have pursued technical-vocational education programs.

The staff is in the process of surveying management, business, commercial, professional, trade, labor and similar organizations, to determine what information they have concerning their needs for manpower. While preliminary indications are varying, organizations either have information or are willing to gather it. This study was high priority because of the Council's regard for information gained from these private sources as a correlation factor with state agency information.

PART II - Section 7(j)

Recommend a state plan for the development of a comprehensive manpower program in conjunction with the Manpower Development and Training Act of 1962, as amended;

In studying this responsibility, one of the first essentials is to define manpower. In this section it is believed that the legislature meant a broad definition of the word. Dr. F. Ray Marshall, University of Texas, in an address to the State Manpower Advisory Committee in July 1970, defined manpower as ... "preparation for existing and future jobs. It means all phases of training, labor market information systems and programs to match people with jobs through mobility programs." He further pointed out that manpower must have employability attached to it. That it does not mean ... income maintenance, unemployment insurance, economic development, job-creation nor that it can single-handedly solve all our social and economic problems.

All twelve recommendations of the Advisory Council are designed to strengthen all phases of the education and training aspects of a Comprehensive Manpower Program in Texas. The intent of the recommendations, particularly I, pages 35 and 36, Attachment 1, is to establish a commitment on the part of the education system to adequately serve the career needs of citizens from the elementary through adult years. The Council holds the view that aggressive action must be taken to stop the flow of persons into the pool of unemployed and underemployed, while at the same time utilizing remedial programs for the pool which already exists.

The Advisory Council is alarmed at the proliferation of management found in its study of the flow of funds as outlined on pages 5 through 7 of Attachment 1. This referenced study attempted to deal only with the training and directly related activity aspects of manpower. Related activities of manpower have not been traced, but no doubt are a part of most state and federal agency activities.

A Comprehensive Manpower Planning Staff (CMP) was established in the Office of the Governor with objectives similar to those outlined in this section. The Advisory Council has worked with this (CMP) Staff in complementary efforts. The Advisory Council staff has participated in State Cooperative Area Manpower Planning System (CAMPS) meetings. The Council has studied the State CAMPS organization and plan. Legislation has been pending in the U. S. Congress, throughout the life of the Council, which would, if implemented in the state, bring about rather drastic changes in the flow of funds and the administration of manpower programs supported by federal agencies. The state, regional and local CAMPS activities have made worthwhile contributions at all levels in coordination of resources for meeting needs of people principally in the area of remedial programs.

No longer can we think of the Texas Education Agency as the sole agency involved in all aspects of education and training. There are few, if any, state and local governmental agencies that are not involved in some aspects of education and training, and our private institutions, employers and others are deeply involved in education and training.

The Advisory Council is convinced that the unnecessary establishment of dual systems and activities simply accelerate costs and general frustration. Present education institutions must assume their full responsibilities for the TOTAL education of citizens. They should have responsibility for the remedial

education and training work which previous and present programs make necessary in order to make corrections to present programs. The Advisory Council has made several recommendations directed to the needs of adults; expansion of technical-vocational education opportunities; and the placement and follow-up of students. See Recommendations II, pages 37-40, III, page 41, XI, page 49, Attachment 1.

PART II - Section 7(k)

Recommend the state plan, training institutions, and means of coordination of manpower training as provided in the Manpower Development and Training Act of 1962, as amended; and

This section of the law is one with which the Advisory Council has had difficulty since there is also a State Manpower Advisory Committee charged with the same responsibility under provisions of the Manpower Development Training Act of 1962, as amended. The Manpower Advisory Committee should become part of this bill or the bill should clarify the role of the Advisory Council on Technical-Vocational Education in Texas.

This will be the subject of further comment and explanation from the Council when Senate Resolution 865 is explored.

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PART II - Section 7(1)

Recommend research projects as may be necessary to implement and improve a statewide system of technical, vocational and manpower training from funds provided by appropriations from the United States Congress or private gifts, grants or awards;

The Advisory Council has participated in the following contracted and staff studies during the last year:

1. The Advisory Council joined the State Board of Education, and the Coordinating Board, Texas College and University System, in a request to the Texas Research League to conduct a study entitled, "Financing a Statewide Community College System in Texas". The study which was completed in August 1970 is under consideration by the Council.

2. The Advisory Council funded "A Study of Program Costs of Technical-Vocational Education", by Central Texas College, which was completed in August 1970. The study has been accepted by the Council as a guide for development of realistic levels of funding for technical-vocational programs at the post secondary level. See Recommendation XI, page 49 of Attachment 1 for further information.

3. The Advisory Council provided a limited amount of funds and joined the Texas Hospital Education and Research Foundation in developing a "Status Report on Employment in Allied Health Manpower in Texas 1969". The Allied Health Manpower field is one of the fastest growing in technical-vocational education and the shortage of personnel in this field is most critical.

4. A consultant contract was initiated by the Advisory Council with Dr. Ken Hoyt, University of Maryland, to explore with post-secondary institutions in Texas, a "Specialty Oriented Student Research Program", a system of follow-up and feedback on students completing vocational education programs, at the post secondary level which will (1) provide information on occupations to prospective students; (2) provide an evaluation of programs and institutions, and (3) provide follow-up studies on students who have pursued technical-vocational education programs. The program has been successfully utilized in other states for several years and study is underway by the Texas Education Agency for implementing the system in Texas. The program would provide information badly needed by institutions, prospective students, the Advisory Council and others.

5. A consultant contract was initiated with Dr. Robert E. Kraner, by the Advisory Council, EPIC Diversified Systems, Tucson, Arizona, for an evaluator review of evaluation guidelines. The review was for the purpose of giving direction to the Council staff in evaluation which is one of the principal responsibilities of the Council.

6. A study was done by the Council, completed in March 1970, entitled "A Look at the Present Patterns of Source, Management, and Application of Public Funds Used in Technical-Vocational Education and Directly Related Activities in Texas, Fiscal Year 1970". The summary of the study is found on pages 5 through 7 of Attachment 1. The study revealed the many trails funds take in the technical-vocational education field, which points up the need for better coordination to

eliminate much duplication of effort.

7. A staff study of the training resources in technical-vocational education was completed in March 1970. The study is reported on page 8 of Attachment 1. This is a continuing study which is being updated and expanded.

8. A Council Study of Student Follow-Up at the Secondary Level was initiated a year ago, and completed in July 1970. The study is reported on pages 8 and 9 of Attachment 1. The study revealed a serious deficiency in reliable information on follow-up students, and the Council made a recommendation on page 48 of Attachment 1, which, if implemented would correct this.

9. Several staff analyses have been made for use by the Council. These involve special treatment of data provided by the Texas Employment Commission, Texas Education Agency and other agencies and groups.

10. A grant was secured from the Halliburton Educational Foundation for the production of the film, "The Future ... "My Destination".

Further studies are urgently needed and will be conducted as identified to fulfill the responsibilities of the Council.

PART II - Section 7(m)

Recommend and evaluate a program of teacher certification for instructors of occupational training courses;

The Council in its investigation has been made aware that the supply of technical-vocational teachers relies upon proper certification of quality instructors. However, the availability of teachers may depend upon the economic relationship between teaching and similar jobs in industry.

The sources of technical-vocational teachers are degree programs, successful employment experience and in some cases a combination of the two. The Council in Recommendation VII, page 46, Attachment 1, has made recommendations designed to provide a good supply of well qualified technical-vocational personnel.

Closely related to the question of effective teacher certification is the matter of professional education. The Council's recommendation in this area of concern is found in Recommendation V, page 43, Attachment 1.

PART II - Section 7(n)

Recommend and evaluate a state-wide plan for the development of a comprehensive program of apprenticeship training.

The Council has had apprenticeship training under study for the past year but is not in a position to make a recommendation for a state-wide plan.

Recent Bureau of Apprenticeship and Training (BAT) figures reveal the following broad listings of occupations in Texas utilizing registered apprenticeship programs to train journeymen:

Construction - 7448
Metal Manufacturing - 799
Non-Metal Manufacturing - 655
Public Utilities - 17
Trade Services - 825
Mining - 9

This listing totals 9,503 apprentices, 74% in construction trades, 26% in non-construction trades, and includes 700 registered programs in 380 apprenticeable occupations in Texas.

Apprentice training programs are administered under local joint apprenticeship and training committees composed of equal representation from management and labor. Some programs are administered under management committees. Public assistance is not given for the annual 2,000 hours of on-the-job training. These expenses are borne by the employer. State administered federal tax funds are used in reimbursing instructors salaries for the 144 to 250 hours of occupation related classes. The following chart indicates the usual sources of funds for the program:

PART II - Section 7(n)

Type of Training/Costs	Fed. Voc. Funds	Joint Appr. Comm.	Empl.	Appr. Tuition	Local Schools
2,000 hours annual on-the-job training;					
Salary of apprentice			X		
Lost time to employer receiving on-the-job instruction					
Inefficient production as learner			X		
Lost time to employer instruction apprentice					
Salary of journeyman			X		
144-250 hours annual related classroom instruction;					
Salary of instruction	X*				
Approximately 75% of $6.00/hr.					
Approximately 25% of $6.00/hr.				X	
Books				X	
Instructional Materials and Supplies		X			
Tools and Equipment		X			X
Classroom & Labs		X**			X

The Texas Education Agency has for many years passed on the limited federal tax funds earmarked for adult training to apprenticeship. As in other adult education, there are no state tax monies expended. For rationale of the Council on adult training, please see pages 14 and 15, Attachment 1.

*TEA data indicate only 55% of apprentices in the state participate in funded related instruction.

**Due to a lack of flexibility, inadequate building programs, and often lack of interest on the part of local administrators, apprentice programs are utilizing private facilities for related instruction.

Due to the small incentive provided by public funds, apprenticeship training is for all practical purposes a private program. Traditionally, BAT has fulfilled a role of promotion and technical assistance to this vital method of training. If the Council is to recommend and evaluate a state-wide plan for the development of a comprehensive program of apprenticeship training, a great deal of study plus close coordination and assistance from management, labor, and the BAT will be required.

PART III

FIRST ANNUAL REPORT
The Advisory Council for Technical-
Vocational Education in Texas

The First Annual Report of the Council is Attachment 1 to this report. It was submitted to the State Board for Vocational Education on September 12, 1970, was accepted for transmittal to the United States Office of Education and the National Advisory Council for Vocational Education, in accordance with Section 102.23(c), Federal Rules and Regulation, P.L. 90-576.

Appendix C of the First Annual Report contained recommendations to the State Board for Vocational Education in Texas. The State Board instructed its staff to review recommendations and after study and investigation to make recommendations to the Board with the following priorities:

1. Recommendations requiring appropriation of funds for consideration of the Board at the October 3, 1970 meeting

2. Recommendations requiring legislative action to implement for consideration of the Board at the November 9, 1970 meeting

3. Recommendations requiring Board and Administrative action will be considered and acted upon as soon as practical and as appropriate

There are plans for a report from the State Board for Vocational Education to the Sixty-Second Legislature on action taken by the Board on the Recommendations of the Advisory Council.

FILMED FROM BEST AVAILABLE COPY

THE ADVISORY COUNCIL FOR TECHNICAL–VOCATIONAL EDUCATION IN TEXAS
201 East 11th Street, P.O. Box 1886, Austin, Texas 78767 512/475–2046

2160

VT 017 629
AN EXEMPLARY COMPREHENSIVE OCCUPATIONAL ORIENTATION VOCATIONAL EDUCATION PROGRAM FOR TULSA PUBLIC SCHOOLS. INTERIM REPORT (MAY 1, 1970-DEC. 1, 1971 AND MAY 1, 1970-APRIL 30, 1973).

TULSA PUBLIC SCHOOLS, OKLA.; OKLAHOMA STATE DEPT. OF VOCATIONAL AND TECHNICAL EDUCATION, STILLWATER.
BUREAU OF ADULT, VOCATIONAL, AND TECHNICAL EDUCATION (DHEW/OE), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
OEC-0-71-0530(361)
PUB DATE - 71 129P.

DESCRIPTORS - *DEVELOPMENTAL PROGRAMS; VOCATIONAL DEVELOPMENT; OCCUPATIONAL GUIDANCE; *PROGRAM DESCRIPTIONS; PROGRAM EVALUATION; *VOCATIONAL EDUCATION; ELEMENTARY GRADES; SECONDARY GRADES; *DISADVANTAGED YOUTH; *INTEGRATED CURRICULUM; JOB TRAINING; URBAN AREAS; SEQUENTIAL APPROACH
IDENTIFIERS - *TULSA; PUBLIC LAW 90 576

ABSTRACT - THE PURPOSE OF THIS EXEMPLARY PROJECT WAS TO DEMONSTRATE A COMPREHENSIVE VERTICALLY INTEGRATED AND SEQUENCED VOCATIONAL TRAINING PROGRAM FOR DISADVANTAGED AND PREVIOUSLY UNSERVED STUDENTS FROM GRADE 5 THROUGH GRADE 12 IN AN URBAN SCHOOL SYSTEM. THE SUCCESSFUL PROGRAMS IMPLEMENTED INCLUDE: (1) VOCATIONAL INTEREST CLUBS FOR THE ELEMENTARY GRADES, (2) CAREER ORIENTATION AND EXPLORATION AT THE JUNIOR HIGH SCHOOL LEVEL, (3) SKILL TRAINING IN GRADE 10, (4) COOPERATIVE AND REGULAR VOCATIONAL PROGRAMS, AND (5) SUPPLEMENTARY TRAINING PROGRAMS FOR GRADES 10, 11, AND 12. INSERVICE TRAINING AND SUMMER WORKSHOPS PROVED USEFUL IN DEVELOPING TEACHING UNITS. INTENSIVE JOB TRAINING WAS INSTITUTED FOR DROPOUTS AND SENIOR HIGH SCHOOL STUDENTS. RECOMMENDATIONS, PROGRAM FORMS, AND A BIBLIOGRAPHY OF STATE PRODUCED CURRICULUM AND INSTRUCTIONAL MATERIALS ARE INCLUDED. (AG)

VT 017 629

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
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INTERIM REPORT

Project No. 0-361-0123
Contract No. OEC-0-71-0530 (361)

An Exemplary Comprehensive Occupational Orientation Vocational Education Program for Tulsa Public Schools

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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Box 45208
Tulsa, Oklahoma 74145

George Wright, Project Coordinator

May 1, 1970 to December 1, 1971
May 1, 1970 to April 30, 1973

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The project reported herin was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily present official Office of Education position or policy.

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SUMMARY OF THE REPORT

A. TITLE AND PERIOD COVERED:

Exemplary Project No. 0-361-0123, Contract No. OEC-0-71-0530 (361), as assigned to the Oklahoma State Department of Vocational and Technical Education, sublet to the Tulsa Public Schools for implementation in the four quarter period of May 1, 1970, to December 1, 1971.

B. GOALS AND OBJECTIVES OF THE PROJECT:

The purpose of this exemplary project is to demonstrate a vertically integrated and sequenced vocational training for disadvantaged and previously unserved students from grades five through twelve in a comprehensive urban school system.

The major objective of this project is to develop an exemplary "total" school approach to meeting vocational education needs for disadvantaged and other youth who have not previously received benefit from vocational training. The program exemplifies the impact that a "total" program can have on the youth, their teachers, and the community; culminating therefore, with these three facets working together, in providing the community youth with salable job skills.

Five phases were developed for this "total" school approach to provide the following: elementary school vocational orientation; junior high school vocational orientation and exploration; tenth grade cluster skill training; eleventh and twelfth grade cooperative training for disadvantaged; senior high school intensive job training; and dropout intensive job training.

C. PROCEDURES:

Each of the five phases developed has a specific procedure.

PHASE I. Elementary School--Introduction and Orientation to Occupations

Special interest clubs built on the extension service concept are the heart of this phase. The clubs are formed around the interest of fifth and sixth grade students in such areas as electronics, horticulture, cooking, drawing, etc. In club meetings, all occupations clusters are introduced and job opportunities for each are presented.

PHASE II. Junior High School-Orientation and Exploration of Occupations

A career orientation program is offered for seventh grade in two junior high schools. These programs include foods, sewing, and service occupation training for girls; construction, manufacturing, power and service occupation training for boys.

An exploratory program is provided for selected junior high school students in the eighth and ninth grade levels through a rotation programs using regular practical arts facilities and mobile van units equipped with industrial arts, home economics, and business education facilities.

PHASE III. High School (Grade 10)--Skill Training

One selected high school takes the students who have had the elementary and junior high school vocational training and, under the guidance of vocational teachers, gives skill training in two-semester (two periods per day) programs in one of the career areas the student may choose from the cluster programs previously experienced by her or him in Construction or Home and Community Service programs.

PHASE IV. High School (Grades 11 and 12)--Cooperative and Regular Vocational Programs

The student completing skill training at tenth grade level can now enter regular vocational programs offered in the local high schools or the specialized training offered in the area vocational center.

PHASE V. High School (Grades 10 through 12)--Supplementary Training Programs

This phase has not been fully implemented during this period of time. Occupational areas in business education (typing, filing, bookkeeping, record keeping, use of small calculators, duplicating equipment); marketing and merchandising (retail sales); offset printing; service station attendant and light automotive maintenance and child care aide were offered during the last nine weeks of the 1971-72 school year.

D. RESULTS AND ACCOMPLISHMENTS:

The programs implemented have been well received in our elementary and junior high schools, and interest indicates success is being accomplished at all levels, elementary, junior high, and senior high.

I. Programs have been established in eight elementary schools, one of which closed at the end of the 1971-72 school year.

II. Full orientation programs have been developed in three selected junior high schools, one of which closed at the end of the 1970-71 school year.

Exploratory rotation programs in industrial arts, home economics, and business education have been operated for fourteen junior high schools.

III. Skill training in construction programs and home and community service programs has been fully implemented in the high school serving the junior high schools in which the orientation programs and exploratory programs were given. This skill training was offered for tenth grade level students.

IV. Eleventh and twelfth grade students received either cooperative or regular vocational training in the high school programs. The student has a wide choice of programs in both regular high school programs and specialized programs in the area vocational center.

Effective programs for the population involved have been developed in monthly meetings involving teachers, principals, counselors, consultants, supervisors, and coordinators. These monthly meetings were held on Saturdays; some called meetings on weekdays sere added as needed.

A three (3) week workshop was operated for teachers and staff in the Exemplary program during June. With the aid of AMIDS staff personnel and the curriculum personnel from the Oklahoma State Department of Vocational and Technical Education, the teachers developed teaching units for implementation into the programs.

Through these summer workshops and special group meetings, teaching units have been developed, field tested, revised, refined, and validated in actual classroom presentations. Some of the most valuable revisions have developed from the Saturday group meetings.

Successful classroom results have been obtained from teaching units developed by the curriculum department of the Oklahoma State Department of Vocational and Technical Education as well as some commercially developed units.

E. EVALUATION:

Considering delays encountered in funding certain aspects of the programs, the implementation of the project in Tulsa Public Schools has proceeded quite well.

Completion of the staffing of the project in late August, 1971, finds us in a good position now for more rapid accomplishment during the balance of our project period. The experiencing of

late funding and some necessary reworking of line items in the original budget delayed the filling of the following key positions until that time: program coordinator; junior and senior high school counselors; and the elementary counselor/club coordinator.

Fourteen junior high schools have programs operating under the funding of the Coordinated Vocational Education and Training programs for the handicapped and disadvantaged. These programs are operated at the eighth and ninth grade levels.

The Central High School cluster programs were funded in April, 1970, and planning and acquiring of supplies, tools, and equipment were immediately accomplished. Fruitful results are already being experienced in these programs.

As the Tulsa Public Schools, through the office of the director of vocational education, accepted the Exemplary Program, the high school program at Central and the programs at Roosevelt, Horace Mann, and Lowell Junior High Schools were removed from the CVET program and made a part of the Exemplary Program. This program is now representing the three (3) feeder junior high schools to the inner city high school, Central. With the help of the CVET program, four (4) secondary schools were actually in operation at the beginning of the school year in September, 1970.

When approval and funding were completed for the Exemplary program, eight (8) elementary schools were invited to participate in the project, with fifth and sixth grade students in the after-school career activities. Implementation of this elementary program was in operation at the first of the school year for 1971-72.

An important segment of our successful implementation of the program has been accomplished in our summer workshops and monthly meetings of involved personnel on Saturdays.

Our evaluation was well supported by the report made in September, 1971, by the outside evaluation team. The report of the evaluation team for 1971-72 school year has not been completed.

An advisory committee has been selected for Exemplary program and should enhance the community involvement in the program hereafter.

F. CONCLUSIONS AND RECOMMENDATIONS:

The project is an excellent effort and learning experience in the Career Education concept, having a profound effect in many areas of our school system and community. Many educators outside the vocational area are becoming aware and interested in this thrust. Students involved at the elementary level are becoming aware for the first time of the beneficial effects of the World of Work and the requirements for entering this world. The orientation and

exploration efforts, in addition to our regular industrial arts, home economics, and business education courses, are making an impact on the students, school, and community. Our efforts at the tenth grade level, with specific cluster education and training, is only a small effort relating to the need at this level. We recommend broadening of efforts at this level to better serve the needs of the students and community.

A great many more opportunities in more clusters are needed, in addition to one hour regular classes, in broad areas of industrial arts, homemaking, and business education.

We realize that more effort will have to be put into meeting the objectives as set forth in the original proposal and also realize that we are now in a better position through improved staffing to expend this effort during the forthcoming period of our project.

We recommend the increased implementation of the cooperative on-the-job training experiences in a cluster of occupations to intensify skill training and increase job readiness.

Our supplementary training programs such as summer training for job entry will be developed and implemented.

We plan to add one student group in business and sales at Horace Mann Junior High School with part-time assignment of regular business education teacher and extended day.

A correlation with curriculum at the lower elementary levels with the help of the fifth-sixth grade club activities and staff is proposed for future development and implementation.

The Mini-Model Sand Springs project (K-12) will be aided in any way possible, and we plan to study and learn from their efforts at the K-6 level.

In addition, we recommend the development of a guide for teachers of practical arts in the junior high schools for use in the seventh grade up as an aid in implementing the orientation and exploration into careers related to the subject areas as students are routed through the practical arts units.

BODY OF THE REPORT

A. PROBLEM AREA

This project has been directed toward a career orientated education program that will relate school and careers. Exemplary efforts made in grades five through twelve are providing students with the opportunity to gain a better understanding of the world of work and an individual desire to enter this world of work.

A summer workshop was held before the program was implemented to give the instructional staff some special training in handling the disadvantaged and handicapped population with which they were to be involved in this program. The AMIDS personnel gave specialized techniques for dealing with instruction of these students. The curriculum personnel from our Oklahoma Department of Vocational and Technical Education gave specialized training in the development of teaching units.

During the school year, monthly meetings were held in which the administrative and instructional personnel had an opportunity to develop, revise and refine teaching units to fit the classroom situations in our school system. Involved in these meetings were teachers, principals, counselors, consultants, supervisors, and coordinators. The meetings were held on Saturdays, once a month.

The program was designed as a total integrated program (See Appendix, Abstract, page 20, Description) for grades five through twelve to meet vocational training needs for disadvantaged and other youth who have not previously been served. Each segment with all working together, culminates in youth with salable job skills.

Administrative Structure: The State Director of Vocational Education is responsible for the general administration of the program. The local director of vocational and technical education has overall supervision and administration of the project in Tulsa, working in close cooperation with the State Department, departments of the schools and principals concerned. A project coordinator of the exemplary programs is responsible for the operation of the project. Vocational counselors, teachers, occupations teachers, a vocational club coordinator, and teacher-sponsors are assigned to implement this program.

Program Design: The World of Work project has operated in the following elementary schools: Pershing, Irving, Jefferson, Longfellow, Riverview, Johnson, Lowell, Lincoln; two junior high schools, Roosevelt and Horace Mann; and Central High School which receives students from the elementary and junior high schools listed.

B. GOALS AND OBJECTIVES

Original Objectives: The major objective of this project is to develop a model school situation as an example to that school and others of how

vocational guidance, training, and placement may be most effectively presented to students. Specific objectives toward which the staff of this project will aim are:

1. To establish methods whereby elementary school students may become acquainted with the wide range of occupations and the varied educational offerings of the school.
2. To combine our latest findings relative to vocational guidance into a counseling and exploratory work experience program for junior high school students which will provide them with the necessary skills to make a reasonable occupational and training choice.
3. To provide the skills training in a cluster of occupations at the tenth grade level which will insure entry level competency and potential advancement characteristics for success in cooperative programs or in day trade programs in the area school or home high school.
4. To institute cooperative on-the-job training experiences in a cluster of occupations to intensify skill training and increase job readiness.
5. To provide intensive skill training to those non-vocational about to leave high school for a job.
6. To increase the students' understanding and desire for additional training beyond high school where appropriate.
7. To inaugurate supplementary training programs such as summer training for job entry.
8. To try alternative methods based on related research for using the facilities of the area school in an exemplary program.

Amended Objectives:

Elementary

1. To develop in students an interest in the world of work.
2. To help students relate their preferences to the educational requirements and job tasks needed in various occupations.

Junior High

1. To develop students' knowledge of how to gain entry into and to succeed in the world of work.
2. To increase the students' knowledge of the jobs and occupations within various occupational families.
3. To increase the students' knowledge of vocational interests and capabilities.

Senior High

1. To assist students to narrow their vocational choice to one cluster or occupational family.

2. To offer sufficient exposure to skills and related experiences in an area to provide data for further career planning.

3. To develop students' entry level vocational skills in selected occupations.

C. DESCRIPTION OF GENERAL PROJECT DESIGN AND PROCEDURES

Elementary School: Introduction to Occupations (World of Work) Grades 5-6

A program in eight elementary schools designed for all children in grades five and six to provide a basic understanding of various occupations, to develop the attitude that all honest work is honorable, and to motivate a desire for participation in the world of work.

At these fifth and sixth grade levels, a method useful in occupations orientation has been copied from the successful 4-H Club practices. Special interest clubs have been formed in each elementary school with appropriate projects related to occupation information. These clubs involve businessmen, craftsmen, advanced vocational students, classroom teachers, and parents in sponsoring roles. Special interest clubs such as horticulture, electricity, wild life conservation, small engines, sewing, drafting and design, and health career clubs are the types of clubs that have been successfully organized under the leadership of teacher-sponsors and club coordinator.

Club meetings were held once a week after school (3:00-4:00 p.m.). These teachers have a full schedule of classes as elementary teachers; each taught an extended day for this program. Number of students enrolled in the World of Work Clubs were: Irving, 24; Jefferson, 27; Johnson, 50; Lincoln, 52; Longfellow, 22; Lowell, 25; Pershing, 30; and Riverview, 22. Interesting fact was that these clubs lost no membership during the year; gained each month which indicated that interest started at a high level with the students and remained at this high level.

Materials were developed by Tulsa teachers in the summer workshop and were specially designed for club use. A complete list of the units developed by our teachers are shown on Appendix, page 112, Bibliography of Locally Produced Curriculum and Instructional Materials.

Most often used commercially prepared materials were the S.R.A. Widening Occupational Roles Kit (W.O.R.K.) for Grades 6-9. Occupational information on some 400 occupations is given in capsule form. A short fictional narrative describes the typical person at work in the occupation presented. The narrative depicts typical activities of the worker and some psychological aspects of the job. Topics covered are: required education, useful high school courses, special training or college courses (where applicable), where jobs are found, getting started, training on the job, getting ahead, earnings, number of hours, number of workers, and future manpower requirements.

Two series of filmstrips were exceptionally good for Elementary career introduction: The Working Series, AVID Corporation (6 filmstrips and 4 records) and The Working World (10 filmstrips and tapes). A fuller explanation of these series can be found on Appendix page 61.

Field trips were conducted to give students the opportunity to view occupations at work. Types of industries visited were manufacturers (where students observed occupations from inspector and foreman down to custodian), radio stations, churches (one minister spoke to students on social services), clothing factory, public utilities (gas and electric), airline maintenance center.

Guest speakers for club meetings were very effective. Representative: policemen, radio station and tv station personnel, representatives from Tulsa Area Vocational-Technical Center, advanced vocational students from regular high school programs or Area Vocational-Technical Center, representatives of Tulsa Junior College, a barber who gave a demonstration haircut, hair stylists, beauticians.

More detailed information on each of the eight schools can be found in the Appendix, page 80, under Summary of Activities.

Junior High School: Orientation and Exploration of Occupations - Grade 7
Career Exploration - Grades 8 and 9

At the seventh grade level, all students have an opportunity to learn about the jobs and careers available in the world of work. They have an opportunity to be exposed to various careers so they will be able to decide if they are interested in exploring certain career clusters in more depth at a later time. The Career Orientation Programs are not aimed at decision making, but at providing all students with an opportunity to become exposed to as many different kinds of jobs and careers as possible over a one-year period.

The Career Exploration Program at the eighth and ninth grade levels is a logical next step following the career orientation in that it provides all students with an opportunity to explore some job cluster area: Construction and Manufacturing; Power, Transportation, and Service Occupations; Business, Office, Clerical and Sales; Home and Community Services, and Health Occupations.

The industrial arts, homemaking, and business education courses are a part of the regularly scheduled curriculum at junior high school level, using regular practical arts facilities to implement the program. Four of the five junio high teachers in the exemplary program in Tulsa were on an extended day, teaching an extra hour to offer the orientation and exploration occupations program.

Enrollment in the two junior high school programs was: Horace Mann, Home, Community, and Health Occupations 16; Construction, Manufacturing, Power and Service Occupations 16. Roosevelt, Home, Community and Health Occupations 16; Construction, Manufacturing, Power and Service Occupations 15; Business, Office, Clerical and Sales Occupations 38, in three classes (10, 13, 15). Lowell, closed June 1, 1971.

Each of the instructional areas has hands-on experiences in a number of occupational clusters.

Home, Community and Health Occupations: Learn to operate a sewing machine, make skirts and blouses, learn to use scissors properly, set up a laundry unit, and other hands-on experiences. Actual experience in preparing and serving food, improve grooming and develop personality,

study job application techniques. Child care and home nursing activities are explored. Tield trips to local utilities for demonstrations of laundry unit and food preparation methods.

Construction, Manufacturing, Power and Service Occupations: Carpentry, build model houses; masonry, build cement blocks and stepping stones. Construction of dog house. Build concrete forms, trim sidewalks, mow school grounds, cultivate around trees, hedges and shrubs. Line production activities, service and repair of small engines, and small appliance repair. Field trips to construction sites, industrial plants, and service installation.

Business, Office, Clerical and Sales Occupations: Practice using a typewriter, learning shorthand, filing, receptionist activities, using cash register, making out sales slip, using selling techniques, etc.

All of these students receive opportunity to obtain social security cards, work permits, and health cards for service occupations.

More detailed information on each of the five teachers and programs of the two junior high schools can be found in the Appendix, page 87 , under Summary of Activities.

Materials used were developed by Tulsa teachers in summer workshops and in monthly meetings during school year. Some units developed at State level have been used at junior high level. For a complete list of the locally developed units and the units developed by our state department of vocational and technical education, see Appendix, page 112.

Senior High School: Cluster and Skill Training - Grade 10

The students are now given an opportunity to become selective. Some of them might select job preparation programs that are offered through regular vocational education and cooperative vocational education programs. Others may prepare themselves for college and become prepared through the academic, baccalaureate degree route. Others may find that they need additional experience and an opportunity to become adjusted to jobs. These students select, then, special needs vocational education programs such as this one offered in Central High School.

The skill training phase of the program is under the direction of vocational education teachers. The program is designed and schools designated so that students will feed from elementary school to junior high school and into this program at high school level.

This two-semester, two periods per day, program will be devoted to some skill training in a cluster selected by the student as a result of his previous experience in the exemplary program. The counselor is a key person in the success of the student and the program.

Two vocational teachers are handling three two-hour sessions each day. Enrollment: girls, three sections, 13, 15, 11 = Total 39; boys, three sections, 9, 17, 15 = Total 41.

Materials were developed by Tulsa teachers in the summer workshop and monthly meetings during school year. Teaching units were designed for particular classroom use. See Appendix, page 112, Bibliography of Locally Produced Curriculum and Instructional Materials for a complete listing of available units.

Activities successfully used in these programs are listed. Industrial Arts: house plans, drawing a set of plans making the front and side elevations, wall section, laying shingles on roof; taught use of drafting tools, hand tools, and power tools; buld a one-room house in shop. Guest speaker who owns own company emphasizes importance of being on time, doing good work, and loyalty to employer. Homemaking and Sewing Services: make patch-work pillows, macreme belts, crocheted rings, sell work. Grooming and Personal Development: field trip to Merle Norman for facials, demonstration of straightening black's hair, modeling demonstration by Sears fashion coordinator. Other field trips made to Sky Chef and Bryan's Infant Wear. Assembly line production of garments observed and experienced in classroom training. Students given opportunity to take Vocational Test by Department of Defense.

More detailed information can be found in Appendix, page 80, on these two programs at Central.

Senior High School: Cooperative and Regular Vocational Program
Grades 11-12

After students have completed their cluster skill training at the tenth grade level, they go into either regular cooperative or all day vocational programs in the local high school or the area vocational school. Many of these students who might not have succeeded in the regular program under normal conditions might now, because of their participation in these exemplary programs through grade 10, be ready to move into the mainstream of vocational students. One of the aims of this program is to prepare students for success in the traditional training programs or on the job.

Complete information on the full programs available in the Tulsa Public Schools is given in "Implementing a Program of Vocational-Technical Education in the Tulsa Public Schools."

Senior High School: Cooperative Vocational Programs - Grades 11-12

These programs include Distributive Education, Diversified Cooperative Training, Cooperative Office Education, Agri-Business Cooperative, and Home Economics Job Training Cooperative. They are high skill in nature and include skill and technical related instruction within the school coupled with job training plans and on-the-job supervision and coordination. In addition to these programs, many high skill programs include cooperative placement of students during their last semester prior to graduation and entrance to the world of work.

The exemplary cooperative program may be made available to students who still may not be able to compete in a regular program. Built on the Cooperative Education concept, but offering a wider variety of training opportunities, this semi-sheltered work experience program would provide closely supervised on-the-job experiences in a number of training areas. Managers and supervisors would be used who have an understanding of the special problems of working with slower students. A plan in which an experienced person is encouraged to sponsor a trainee is in operation. The coordinator of these programs is sensitive to students' needs and employers' problems. The success of this phase will depend on the ability of the coordinators to convince businessmen to become a part of the training team for these most needy students.

Senior High School: Supplementary Training Programs - Grades 10-12

A number of short term intensive training programs developed to supplement the four phases of integrated vocational programs. They are directed to meet the needs of two populations: (1) Those who drop out of school without a salable skill, and (2) those who are near graduation and have not been exposed to vocational training.

An intensive six-weeks skill training program may be offered at a high school, an area school, or skill training center, for students who failed to enroll in school following the summer vacation. Students for these programs would be recruited through school records, local employment offices, and publicity from available news media--particularly through radio and television spot announcements. Programs offered are based on student desires for training in critical skill areas where successful completion will lead to immediate employment. If there is a demand for them, a second series of programs could be offered in the spring for those who drop out during the school year.

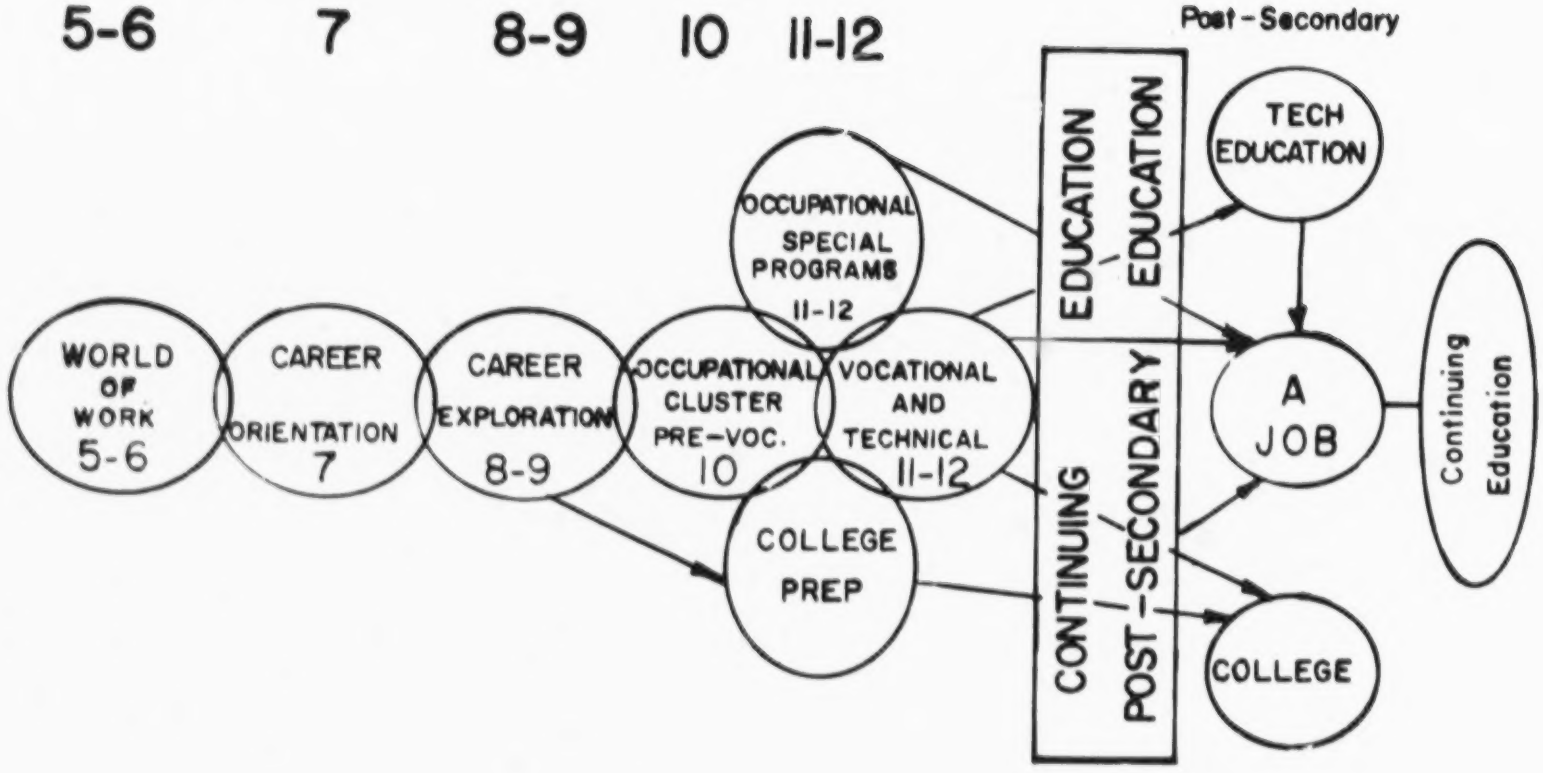
A one-semester program may be offered to graduating seniors the second semester. This program would be only for those seniors who have not previously obtained vocational training. The program would incorporate the State required English course into a full-time vocational program held six hours daily. It would combine skill training in special public school classes with on-the-job training during the last nine weeks. The program would be offered in areas of critical demand by business and industry. An additional two-month summer program may be offered to graduated seniors in July and August if a demand is warranted.

Refer to page 13 for the CAREER DEVELOPMENT CONTINUUM. It will be noted that students are involved in the elementary education World of Work program integrated as a part of the fifth and sixth grade curriculum. It will also be noted that at the seventh grade level, the students will have the opportunity to observe jobs and careers broadly in regular practical arts courses.

This exemplary program has been developed so that it is equally as applicable to students who may enter a career at the highest level, as well as those students who may enter semi-skilled jobs. Programs are designed so that no commitment is made at the elementary world of work or career orientation level, but rather that students as a part of their regular educational program will become involved in career oriented activities so that they will see education as a part of the preparation for life and work, rather than apart from it. The career exploration facet is again for all students and is developed at a depth whereby students can explore and learn in detail about certain job cluster areas that they may have been exposed to earlier. The purpose of this facet of the career development continuum is to help youth gain the necessary experiences and understandings that will help them make a more accurate decision concerning their vocational goals. Their vocational goals may lead them toward enrollment in vocational education job preparation programs at the eleventh and twelfth grade levels, or it may direct them toward the vocational preparation programs offered at college level. In all cases, students progress through the career development continuum toward a job or career. In some cases, youth would enter a job immediately upon graduation from high school. In other cases, they might enter the job upon graduation from a technical school or a college.

Career Development Continuum

GRADE LEVEL



Educational Programs to Provide an Employable Citizen

TULSA PUBLIC SCHOOLS
Division of Instruction
Department of Vocational and Technical Education
In Cooperation with
Oklahoma Department of Vocational and Technical Education

2178

D. RESULTS AND ACCOMPLISHMENTS

The thrust of career education has been well received by our community, our educators, and our young people. High interest in our programs would indicate early success being accomplished at all levels: elementary, junior high, and senior high.

I. Programs have been established in eight elementary schools, one of which closed at the end of 1971-72 school year. None of these programs lost any enrollment during the year; enrollment was added all through the year indicating that those students participating were well pleased and wanted others to have the same opportunity. This also indicated that the counseling efforts have been well directed.

II. Full orientation programs have been developed in three selected junior high schools, one of which closed at the end of the 1970-71 school year.

Exploratory rotation programs in industrial arts, home economics and business education have been operated for fourteen junior high schools.

III. Skill training in construction programs and home and community service programs has been fully implemented in the high school serving the elementary and junior high schools in which exemplary programs, orientation and exploratory programs were given. This skill training offered for tenth grade level students is serving this student population very well. More students can be absorbed into the program as the students progress through our school system to this level.

IV. Eleventh and twelfth grade students receive either cooperative or regular vocational training in the high school programs. The student has a wide choice of programs in both regular high school programs and specialized programs in the area vocational center.

Effective instructional programs for the population involved have been developed in monthly meetings involving teachers, principals, counselors, consultants, supervisors, and coordinators. These monthly meetings were held on Saturdays; some called meetings were held on weekdays as needed.

A three (3) week workshop was operated for teachers and staff in the Exemplary program during June. With the aid of AMIDS staff personnel and the curriculum personnel from the Oklahoma State Department of Vocational and Technical Education, the teachers developed their own teaching units for implementation into the programs.

Through these summer workshops and special group meetings, teaching units have been developed, field tested, revised, refined, and validated in actual classroom presentations. Some of the most valuable revisions have developed from the Saturday group meetings. See Appendix, page 112, for a complete list of units developed locally and at our State level.

E. AN EVALUATION OF OKLAHOMA'S EXEMPLARY VOCATIONAL EDUCATION AND OCCUPATIONAL ORIENTATION PROGRAM, TULSA PUBLIC SCHOOLS

Considering all the problems involved with late funding, the recruitment of new staff, and the initiation of a new comprehensive program, the

progress made by the Tulsa administrators and teaching staff in connection with the exemplary program during the 1970-71 school year is very commendable. It is hoped by the evaluators that the recommendations which follow will be carefully considered by policy makers at all levels regarding the future operation and improvement of this program. The program, in the judgment of the evaluators, has many strengths as well as several components which need improving. Many specific recommendations are made obvious by a review of Section IV of this report, and are therefore, not repeated here.

On the basis of the findings of this evaluation effort, the authors of this report recommend that:

1. Funding of the program should be continued for another year.
2. The program be expanded gradually to include other schools and other students. Although the work being done with disadvantaged youth in this program is excellent and undoubtedly ranks a high priority, the evaluators feel that many students in addition to those classified as disadvantaged could benefit greatly from the program. If finances allow, it should be made available to all students who are interested.
3. A full-time program coordinator and the necessary support staff be employed as soon as possible to give strong leadership to the program. In spite of tremendous efforts on the part of the regular administrative staff, more time and resources must be given to overall coordination and planning of the program.
4. At least three vocational counselor coordinators be employed as soon as possible to assist the teachers and help coordinate the total career development program. The program objectives could be implemented more effectively and completely with the additional staff as originally specified. Ways to achieve closer cooperation between the regular counselors and teachers are also needed.
5. All objectives of the exemplary program be carefully reviewed by the total exemplary program staff to determine both their appropriateness, and to state them in more specific and measureable terms. This effort would help the teachers to better know where they are headed and would make future program evaluations easier.
6. More consideration be given to developing a better integrated program at all levels, K-12. Attention should be given to extending the program downward into the lower elementary grades so as to provide continuity in the career development program, from career awareness at the elementary level to career preparation at the senior high level. Better coordination and integration of efforts is especially needed at the 7th, 11th and 12th grade levels. Teachers at those levels should be involved in all inservice training meetings and workshops.
7. Advisory committees be established to help plan and evaluate the program at all levels. Nearly all the teachers indicated this element was missing - but needed. Such committees would also provide an excellent way to involve more parents, employers, and

employees in the program.

8. Some type of occupational interest clubs be established for students in grades 7-10. Most of the teachers at this level reported this activity as missing - but needed and such clubs would provide an excellent vehicle for helping with the many aspects of student self-development.

9. Participation in the exemplary program, in so far as it is possible, should be voluntary and open to all students desiring it.

10. The intensive training component as called for in Objective #5 be implemented and combined with a strong commitment to place all participating students in either further schooling or employment.

11. An effort be made to schedule more of the elementary special interest club meetings during the regular school day. These teacher-sponsors should also be provided adequate preparation time and help in locating and contacting resource persons.

12. The "big brother" craftsman system be implemented and given a serious trial at the senior high level.

13. Efforts to inform the entire professional staff and the Tulsa community about the exemplary program be continued and expanded.

14. Continued attention be given to conducting regular exemplary program staff meetings for purposes of coordinating efforts and inservice training of staff. The development of appropriate instructional materials during these meetings and the summer workshops should also be continued.

15. The independent evaluation agency and team members, employed to conduct the second year and future evaluations, be contacted early in the fall so as to allow more time for planning and conducting all appropriate activities including the collection of pretest data.

REFER TO: Interim Evaluation Report - August 15, 1971
Robert E. Norton, Lavern Penn, and William W. Stevenson
Research Coordinating Unit
Oklahoma State University
Stillwater, OK 74074

F. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Tulsa has been fortunate to have other programs of Special Vocational Education that have made it possible for us to implement similar programs in eleven (11) additional junior high schools. Curriculum being developed for the eighth and ninth grade students is being used both in the Exemplary and CVET program, making a total of thirteen (13) junior high schools.

The staff concerned with the Exemplary project in Oklahoma (Tulsa) will continue to work toward the implementation of all facets of the project as originally written, or as amended and approved. It is our feeling, considering a late start and with only one year of operation,

considerable progress has been made. We will continue to work toward meeting the objectives of the project as written, amended and established.

Emphasis is being given to coordinate the curriculum of the elementary fifth and sixth grades with our after school career (World of Work) clubs.

An effort is being made to develop instructional materials that include hands-on experiences and activities that will relate to a broad occupational clusters and families.

We plan to add one 2-hour block of time at Horace Mann Junior High School for students in Business Education laboratory (if facilities are available and enough interest shown). This will be on an extended day basis.

A proposal to include Career Education as the overall goal of a planned middle school, along with a unified (practical and fine arts) approach in the curriculum has been made. Interest in developing in the Career Education concept or approach and those in the Exemplary, Practical Arts and Vocational Education programs plan to give leadership to this effort.

We are recommending the continuation of this program, with added effort on all objectives and at all levels.

Short term occupational offerings to second semester seniors is scheduled for March 15, 1972. Remedial work at our Instructional Media Center at the Vocational-Technical Education Center is to be done for pre-apprentices, first and second year apprentices who have deficiencies in related and applied math.

Many good and new techniques are being developed and tested in the Special Vocational Program (Exemplary).

A brochure to be developed giving explicit information on the program to help in publicizing the educational opportunities available through this effort.

Detailed procedures for evaluating and reporting quarterly and annually will be established.

Visits from the staff of the U. S. Office of Education (Exemplary), the Regional Office, the State Department Office, and the Evaluation Team will be anticipated and encouraged.

Plans are underway to activate the Advisory Committee.

APPENDICES

2183

ABSTRACT

Title:	An Exemplary Comprehensive Occupational Orientation, Vocational Education Program for Selected Oklahoma Schools
Project Director:	Ralph Dreessen
Applicant Organization:	Oklahoma State Department of Vocational-Technical Education
Duration of Project:	May 1, 1970 to April 30, 1973
Total Federal Funds Requested:	$498,33

The major objective of this project is to develop an exemplary "total" school approach to meeting vocational education needs for disadvantaged and other youth who have not previously received benefit from vocational training. The program will provide elementary school vocational orientation, junior high school vocational orientation and exploration, 10th grade cluster skill training, 11th and 12th grade cooperative training for disadvantaged, senior intensive job training, and dropout intensive job training.

Exemplary features of the project include: Vocational interest clubs at the elementary level, "on-hands" skill training and exploration at the 10th grade level in a cluster of occupation, and intensive skill training for last semester seniors who have had no vocational training before.

The program will exemplify the impact a total program can have on the youth, their teachers, and the community. Each segment of the program will be followed logically by a greater "in-depth" program which, all working together, will culminate in youth with salable job skills. It will also show the positive effects of research as alternative methods based on related research are established in the program.

The cluster concept will emphasize the broad scale of opportunities which exist in all of the occupational areas. None of the programs will be terminal although each of the training phases will prepare students for job entry at some level. The related education so necessary to advancement will be presented in the most acceptable form in order that the student may nave every opportunity and inducement to move up in his chosen occupation. The occupational orientation phases, as well as the training phases of the program, will speak strongly to the wide range of opportunities which are achievable for the student who aspires to excel. This concept of advancement and excellence in whatever the chosen occupation will be emphasized.

The section of the proposal relating to student selection will illustrate the program concept of determination to serve those students who have been most poorly served in the past. Students with learning difficulties, students disoriented from education, students of limited experience and background are the people for whom this program is especially designed. To make education real and meaningful for those needing it the most will be the aim of this project.

To summarize, this program will be designed to avoid or correct the problem of meaningless schooling for those students not equipped for or interested in the traditional tract of academic education. A second alternative to occupational stability and life satisfaction will be presented in the form of a comprehensive, integrated program of exploration, guidance, training and experience.

Description:

The purpose of this exemplary project is to demonstrate a vertically integrated scope and sequence of vocational training for disadvantaged and previously unserved students from grades 5 through 12 in a comprehensive urban school system.

The total integrated program, grades 5 through 12, is aimed at meeting vocational training needs for disadvantaged and other youth who have not previously been served. The program will exemplify the impact a "total" program can have on the youth, their teachers, and the community. The administrative organization, listed on page 12, shows the seven programs involved. Each segment of the program will be followed logically by a more sophisticated segment which, all working together, will culminate in youth with salable job skills.

Administration

This program will be under the general administration of the State Director of Vocational-Technical Education for Oklahoma. The State Chairman of Exemplary Programs will serve as interim director of the project until a qualified State Coordinator can be selected. The state coordinator will be selected before June 1, 1970. Within each selected school district, a Local Coordinator of Exemplary Programs will be directly in charge of the training. An Advisory/Evaluation Committee will be formed to work with the local coordinator on all phases of program development and evaluation. This Committee will represent the following groups: local administration, vocational teachers, general education teachers, businessmen, state vocational staff, State Advisory Committee, and State Board for Vocational-Technical Education. Consultants from the Research, Planning and Evaluation Division of the State Department will work with project personnel to insure inclusion of the research and research related materials to be exemplified in the project.

The Oklahoma Center for Continuing Education, University of Oklahoma, has submitted a proposal for an exemplary program entitled "Staff Training for the Development of Exemplary Programs for Handicapped Youth Utilizing a VTE Team Approach." If this proposal is approved for funding the State

would depend on this project for the training of counselors and teachers to more effectively work with disadvantaged students.

A local Coordinator of Elementary Vocational Clubs will direct the activities of the interests clubs which will be sponsored by local businessmen or craftsmen, parents and teachers, and students from advanced vocational training programs who will work on a volunteer basis.

Industrial Arts and Home Economics teachers will be responsible for the exploratory program at the junior high level under the direction of the Local Project Coordinator with the assistance of vocational teachers and counselors. Vocational teachers will provide intensive training at the tenth grade level in a cluster of occupations in order to prepare students for job entry into the exemplary cooperative program or the regular vocational program in the local or area school. The exemplary cooperative program will be under the direction of coordinators who will work with businessmen, supervisors, and craftsmen in on-the-job training programs. Vocational teachers will be in charge of the intensive training programs for late entrants to vocational education. Advisory groups made up of persons with broad knowledge by cluster areas will assist vocational teachers with course content and training methods. Selected skilled craftsmen will be hired on a part-time basis to supplement the training of the vocational teacher and to give a realistic approach to the training of the vocational teacher and to give a realistic approach to the training being given. These craftsmen will also be available to other levels of the program for consultation or resource assistance.

Vocational instructors, skilled craftsmen, as well as counselors will be available to assist with supplementary training programs. These programs will be flexible in order that the varying needs of disadvantaged and handicapped students may be met.

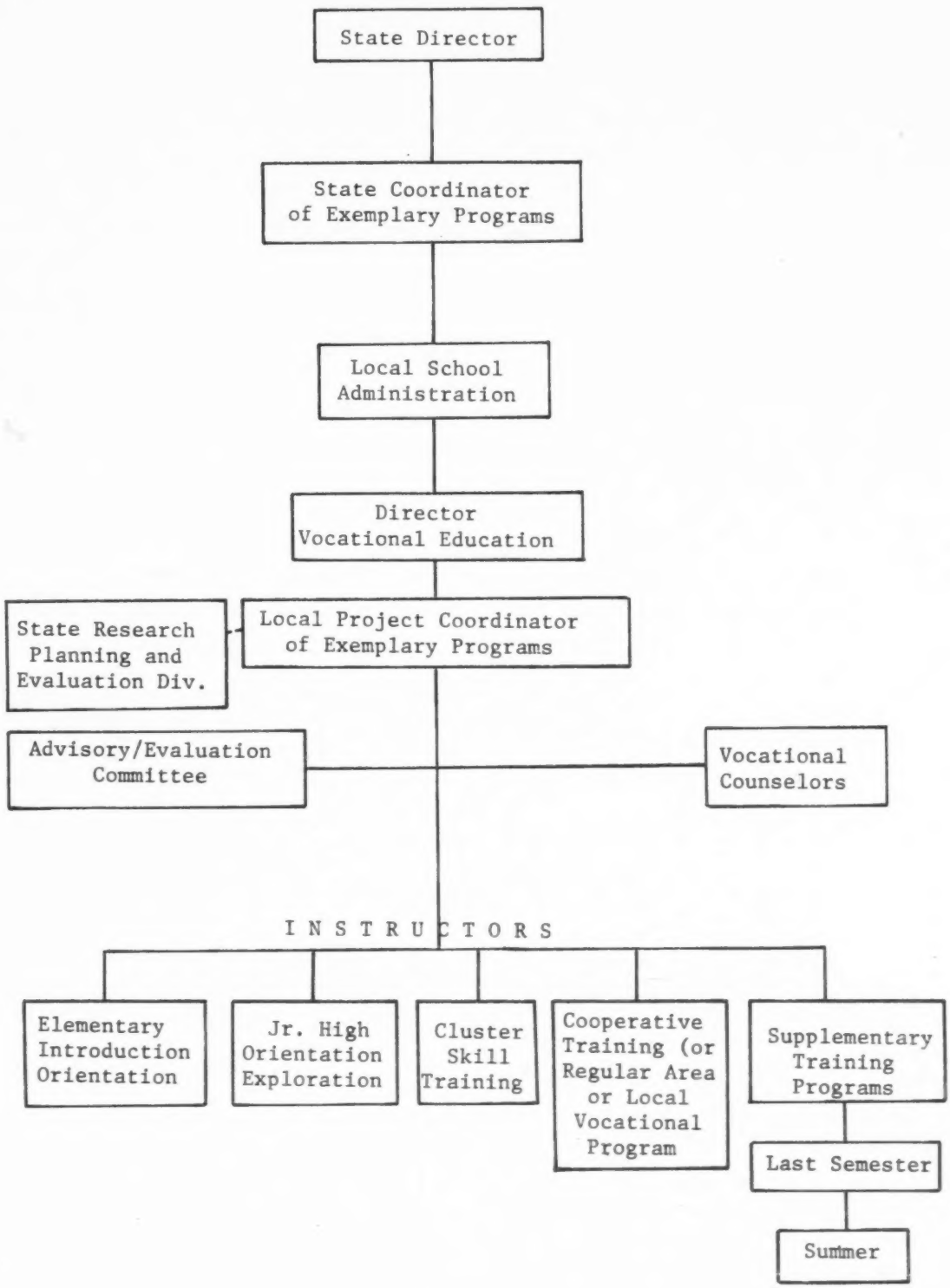
A team of vocational counselors will be working under the direction of the local coordinator and available to teachers and students at any of the levels of the program.

Procedures:

The proposed exemplary program will pull together the best educational and training procedures that can be found in research and experimentation reports in a concentrated effort to break the school rejection syndrome which has limited the effective preparation of youth for work. The uniqueness of this program is the integrating of what has up to now been a rather spotty approach to vocational orientation, exploration, training, experience and placement. This program proposes to combine in one school system, with one segment of the student body all of the best we know about vocational direction and preparation.

(a) General Design: The general plan of this project is based on the assumption that children can be prepared to more effectively choose an occupation and can be more properly trained for that occupation through a program which moves logically through the decision making and learning phases from elementary through high school to on-the-job performance. This elementary school through high school approach

ADMINISTRATIVE ORGANIZATION FOR OKLAHOMA EXEMPLARY PROGRAMS



with specific goals and assignments for each phase should allow the stated objectives to be met and the system to be checked segment by segment to determine the most appropriate sequence of experiences. This built-in correction factor should assist in program evaluation and improvement.

Phase I. Elementary School--Introduction and Orientation to Occupations

Special interest clubs built on the Extension Service concept will be the heart of this phase of the program. A Vocational Club Coordinator will be employed to plan and supervise the overall operation of the program. Clubs will be formed around the interest of 5th and sixth grade students in such areas as electronics, horticulture, cooking, drawing, etc.

Phase II. Junior High School Orientation and Exploration of Occupations

This phase of the integrated program will depend on a revision of the program of the industrial arts and home economics teachers at the 8th and 9th grade levels. A career orientation course will be offered in the 7th grade in the two selected junior high schools. Cluster explorators experiences will be provided 8th and 9th grade students in industrial arts and home economics programs. Each student will have an opportunity to explore through actual work experiences a number of career clusters during the three years he is in the program at this level. These work experiences will be provided on a rotating basis on work stations which, as nearly as possible, simulate actual tasks performed on the job.

Cluster Concept

Selection of clusters will depend on the occupational demands of the community and the state and the desires and abilities of the students. A suggested list of clusters, a breakdown of the job titles and demand data for two clusters, and a prospective list of teaching materials for two clusters is to be found on page 34 of the proposal.

Phase III. High School (10th grade)--Skill Training

The skill training phase of the program will be established in one selected high school and will be under the direction of vocational education teachers. The program is designed and school designated so that pupils will feed from elementary school to junior high school and into this high school program. This will mean that students entering this program at the tenth grade level will have had the introductory and exploratory experiences described in the preceeding phases. This two semester, two periods per day program will be devoted to skill training in four of the jobs in a cluster selected by the student as a result of his previous experiences in the program. At the outset, before the first feeder programs have been completed, most careful counseling will precede each student's selection of a cluster.

Phase IV. High School (11th & 12th grade)--Exemplary Cooperative and Regular Vocational Program

After students have completed their skill training at the tenth grade level they will either go into the regular vocational program in the local high school or the area vocational school.

Phase V. High School (Grades 10-12)--Supplementary Training Programs

A number of short term intensive training programs will be developed to supplement the four phases of the integrated vocational program. They will be directed to meet the needs of two populations: (1)

Those who drop out of school without a salable skill, and (2) those who near graduation and have not been exposed to vocational training.

A one-semester program will be offered to graduating seniors the second semester. This program will be only for those seniors who have not previously obtained vocational training. An additional two-month summer program will be offered to graduated seniors in July-August if a demand is warranted.

Few, if any, private non-profit schools will be within the boundaries of the participating school areas. However, the following services will be publicized and offered on request to any such school:

1. The Vocational Club Coordinator will be available to help form clubs.
2. Materials for the 7th Grade orientation will be available and workshops relating to the course will be open to teachers.
3. Participation in the dropout program will be especially encouraged and school records will be requested that prospective students may be contacted.

It is anticipated that not more than 10 percent of the students in the program will be from non-profit private schools.

Methods and Materials

Elementary School: The basic guide will be, "A Guide for Developmental Vocational Guidance, Grades K-12," Oklahoma State Department of Education, (1968). The success of the 4H Club concept is well-known. There is reasonable expectation that it will serve well in vocational areas, although it may not have been tried before. Vocational guidance curriculum materials developed by Abington School District, Pa. (ED 022 219) will be used in classroom activities to show students the processes through which career decisions may be made.

Junior High School: During the summer of 1969, the Oklahoma Research Coordinating Unit sponsored a workshop to develop a tentative guide in career exploration. The workshop, directed by Murl Venard, Assistant Director of State Department Guidance and Counseling Section, resulted in publication of "Career Exploration, A Tentative Guide for Teachers." The Guide is being used during the 1969-70 school year in approximately 50 schools widely spread across the State. A workshop of participating teachers will be held during the summer of 1970 to revise the Guide and complete the resource sections. It will be published before 1970-71 school year and will be the basic guide for seventh grade classes. ED 010 013 lists clusters for 8th and 9th grade home economics based on a rational that "among the most important were technical skills involving cooking, sewing, health care, home management, and child care."

At the 10th grade level, job simulation materials such as those developed by Krumboltz (ED 015 517) may be used to augment "hands on" experiences.

A modified design based on the type developed by the New Careers Development Center (ED 020 424) will be useful in the short term intensive training programs. This will force selection of critical needs areas for

skill training where a large number of employment opportunities are assured.

Intensive counseling throughout all phases of the integrated program and after job placement is supported by many documents. Particularly innovative to Oklahoma would be the low ratio of students to counselors and counseling following training or counseling on-the-job.

Evaluation

Several evaluative procedures will be used to assist in determining the extent to which the project is reaching its objectives. The Advisory Evaluation Committee described in the Administration section of this proposal will formally review the work of the program each year and will issue an evaluation report. Teachers and administrators involved in the project will be asked to provide a report which stresses evaluation and suggested improvements. Data on school attendance, academic and vocational achievement, numbers entering vocational or cooperative programs, job placement, employer and employee satisfaction will be compiled to assist in evaluating the program.

A staff member from the Division of Research, Planning and Evaluation of the State Department of Vocational-Technical Education will assist state and local leaders of exemplary programs with evaluation procedures.

Coordination and Dissemination:

The purpose of developing this project in two different school districts (only one school district established) is to manage (at the State Level) the activities of the program in line with the State plan for Vocational Education. If other similar programs are developed in other states, every effort will be made at the State level to cooperate and coordinate activities for the best exemplification of the total system approach to meeting needs of the disadvantaged and unserved youth of our public schools.

Results of the project will be disseminated within the State by visitation to the programs, regular reports distributed through the State Department, and Seminars conducted by the school district and State Department. The final report will include all materials developed by the program or make reference to materials used in the program.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Washington,D. C. 20202

June 25, 1970

Our Reference: BAVTE/DVTE

Mr. Byrle Killian
Assistant State Director
Department of Vocational-
Technical Education
1515 West Sixth Avenue
Stillwater, Oklahoma 74074

Re: Proposal Number
0-361-0123

Dear Mr. Killian:

Our reviewers have completed a thorough examination of your proposal entitled "An Exemplary Comprehensive Occupational Orientation, Vocational Education Program for Selected Oklahoma Schools." Their summary comments are as follows: "This is generally a well-planned and well-written proposal. With a few modifications it could become a fine project. State sponsorship of the project will facilitate diffusion to other school districts." They believe that if the following modifications were made, the proposal could be recommended for approval and funding:

1. Reduce the Federal column of the budget to $107,252 per year. This is the FY 1970 amount available to Oklahoma under Section 142-c of Public Law 90-576.

2. Concentrate on one pyramid of five or six elementary schools, two junior high schools, and one high school; do not try to operate in two different school districts. With only $107,252 of Part D funding to work with, concentration will be necessary to achieve the desired results.

3. Designate the exact geographic location where the project will be conducted. The selection criteria for a site, as outlined in the proposal, are very good. The criteria should be applied, the site should be selected, and a description should be provided of the personnel and facilities available at the location which is chosen.

4. Explain the provisions for carrying the program on with support from regular funding sources after the termination of the Federal assistance under Part D under P.L. 90-576. (This is in accordance with requirement No. 5 on page 2 of Policy Paper No. AVL-V70-1, a copy of which is enclosed herewith.)

5. Describe the steps which will be taken to insure initial placement of all students at the completion of their schooling. In its present form the proposal makes strong provisions for intensive occupational guidance and counseling, but is not explicit about the placement function. (This item is related to requirement No. 4 on page 2 of the enclosed policy paper.)

Your assistance in providing us with modifications and additional information will be most helpful in expediting a final recommendation on your proposal. We would suggest that you prepare an addendum to your original proposal, which would be labeled "Addendum to Proposal Number 0-361-0123" and which would cover the five points specified above. The addendum should be submitted to us in thirty copies, and we will attach the addendum to the original proposals.

In preparing the addendum, your staff members might wish to consult with Mr. William Cummens in the U. S. Office of Education's Regional Office in Dallas. In addition, my Branch will be glad to assist your personnel in developing the addendum, either by telephone discussions, by reacting to draft materials which you might mail to us, or possibly by and exchange of visits.

We believe that, upon receipt of a satisfactory addendum from you, we would be in a position to recommend your proposal for approval by the Associate Commissioner. We hope, therefore, that you can send us an appropriate addendum at an early date. If I can be of assistance to you and your staff in accomplishing this, please let me know.

Sincerely yours,

Albert J. Riendeau
Chief, Pilot and Demonstration Branch

Enclosure:
Policy Paper

cc: State Director of Vocational-Technical Education

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
Francis Tuttle, Director . 1515 West Sixth Ave. . Stillwater, Oklahoma 74074
AC (405) 377-200

August 5, 1970

Dr. Albert J. Riendeau, Chief
Pilot and Demonstration Branch
Department of Health, Education,
and Welfare
Office of Education
Washington, D. C. 20202

Dear Doctor Riendeau:

This is an addendum to Proposal Number 0-361-0123. The five suggested items in your letter dated June 25, 1970, have been reviewed and corrected according to your instructions:

1. The budget for Fiscal Year 1970 will be $107,252 which is the amount available to Oklahoma under Section 142-c of Public Law 90-576. (Budget for Fiscal Year 1971 is enclosed.)

2. The five elementary schools--Pershing, Irving, Riverview, Johnson and Longfellow, and Jefferson; two junior high schools--Roosevelt and Horace Mann; and Central High School will be involved in this exemplary program for Fiscal Year 1970 through Fiscal Year 1973.

3. Tulsa, Oklahoma, Public Schools have been designated as the schools for the state exemplary program. All of the schools are located in the same geographical area of Tulsa, and the area is highly populated and well represented by minority races.

4. At the termination of federal assistance under Part D under P.L. 90-576, this program will be carried on through cooperation of the Tulsa Public Schools and the State Department of Vocational and Technical Education with the use of regular funds and funds that are available for this program.

5. The full-time coordinators for programs for student instruction in this program will be responsible for the placement of students after their schooling. Also, additional State personnel will assist in the placement of these students and provide occupational guidance and counseling to help in the placement of students receiving such training. Business and industry in Tulsa and the immediate areas have been surveyed and known placement opportunities exist for students receiving vocational training. The

Oklahoma Employment Security Commission has determined the demand occupations and this project will train persons to meet these special needs. The Employment Security personnel will assist in specialized placement, and the vocational instructors in this program and the state industrial coordinators of the area will assist in job placement of vocationally trained persons.

An independent comprehensive evaluation of the program will be provided each year. The evaluation team will be composed of educational and industrial leaders who are not otherwise associated with the State Department of Vocational and Technical Education or the Tulsa Public Schools. The team will be selected by the State Coordinator of Exemplary Programs and the Local Director of Vocational and Technical Education with assistance of the Advisory Evaluation Committee.

The local directors of vocational and technical education, the administrators of the Tulsa Public School System, and the instructors are highly motivated and interested in this project. Many programs now under way are pointing to the implementation of this statewide Proposal Number 0-361-0123.

We respectfully request early approval of this project in order to implement this program in the Tulsa Public Schools during Fiscal Year 1971 through Fiscal Year 1973.

Yours very truly,

Byrle Killian
Assistant State Director
Vocational and Technical Education

BK/bjs

Enclosures

BUDGET

Title of Project: An Exemplary Comprehensive Occupational Orientation, Vocational Education Program for Selected Oklahoma Schools

Name of Project Director: Ralph Dreessen

Applicant Organization: Oklahoma State Department of Vocational and Technical Education

Proposed beginning and ending dates: May 1, 1970 to April 30, 1973

Category	First Twelve Months
DIRECT COSTS	Federal
A. Personnel	
1. State Coordinator	N/C
2. Local Director of Vocational and Technical Education	N/C
3. Local Coordinator of Exemplary Program	10,000
4. Vocational Counselor for 6 Elementary Schools	8,000
5. Vocational Club Coordinator for Elementary Schools	8,000
6. Club Sponsors, 6 @ $7/hr. for 570 hrs.	4,000
7. Craftsmen or Consultants, 50 days @ $50/day	2,500
8. Vocational Counselor for 2 junior highs	8,000
9. School Counselors in Junior High, 2 per school at 2 schools, 1/4 time	N/C
10. Home Economics Teachers, 1/2 time in 7th grade Vocational Orientation, 1 per school at 2 schools	N/C
11. Industrial Arts teachers, 1/2 time in 7th grade Vocational Orientation, 1 per school at 2 schools	N/C
12. Home Economics Teachers, 8th and 9th grades, 1/2 time per school @ 2 schools	8,000
13. Industrial Arts teachers, 8th and 9th grades 1/2 time per school @ 2 schools	8,000
14. High School Vocational Counselor	8,000
15. 2 School Counselors in High School, 1/4 time	N/C
16. 2 Vocational teachers, 10th grade @ $8,000	16,000
17. Vocational teachers for Senior Intensive Training 4½ months @ $800/mo.	3,600
18. Cooperative Vocational Education Teachers, 2 @ $8,000	N/C(Funded from Part B or Part G)
19. Secretary for Local Director	N/C
B. Employee Benefits	
F.D.I.C. 10% of Personnel Salaries	8,408
C. Travel and Per Diem	
Local Coordinator	400

Category	First Twelve Months
	Federal
D. Supplies and Materials	2,150
E. Communications	250
F. Services Testing and Diagnostic Services from Rehabilitation Division	N/C (100,000)
G. Final Report Production	N/C
I. Other Direct Costs Evaluation and Report	4,000
J. Sub-total in Direct Costs	99,308
INDIRECT COSTS, 8% of total for Direct Costs for Central Administration	7,944
TOTAL COSTS	107,252

January 22, 1971

Mr. M. J. Ruley, Director
Vocational and Technical Education
P. O. Box 45208
Tulsa Public Schools
Tulsa, Oklahoma

Dear Mr. Ruley:

In keeping with our conversation sometime ago, this letter confirms that the State Department of Vocational & Technical Education will honor an increase in salary schedule as show on the addendum as approved for the Exemplary Program in Tulsa.

Category	Original	Changed to
1. Local Coordinator of Exemplary Program	$10,000	$11,000
2. Vocational Counselor for 6 Elementary Schools	8,000	9,750
Vocational Club Coordinator for Elementary Schools	8,000	
3. Craftsmen or Consultants or teacher orientation, 50 days @ $50/ day	2,500	3,300
4. Vocational Counselor for 2 Junior Highs	8,000	9,500
5. High School Vocational Counselor	8,000	9,500
6. Travel and Per Diem - Local Coordinator, Counselor, club coordinator and buses for field trips	400	1,000
7. Other Direct Cost Evaluation and Report	4,000	4,850

Sincerely,

Ralph Dreessen, Chairman
Exemplary Committee

2197

RE: Project Number 0-361-0123
Contract Number OEC-0-71-0530(361)

December 20, 1971

Dr. Sidney C. High, Jr., Chief
Exemplary Programs and Services Branch
Department of Health, Education and Welfare
Washington, D. C. 20202

Dear Dr. High:

Please find enclosed five (5) copies of the line item budget, with explanations and description of original budget line items, as related to the 1971-72 line item budget request for the second year. The layout of the line items as requested in the 1971-72 budget by the Tulsa Public Schools to the State Department of Vocational and Technical Education, was done so that our account system, as followed at the local and state level, are compatible.

The following notes relate to questions that Nancy Rhett had concerning details on items such as instructional supplies and materials, maintenance of instructional equipment and equipment under capital outlay. See attached sample listing of items, as well as requisitions issued at the local level or through the State Department of Vocational and Technical Education.

We are working under guidelines established for us by the State Department of Vocational and Technical Education, purchasing items of equipment under $25.00 at the local level and items over $25.00, with prior approval on VE 6001, may be purchased by the State Department or by the local district.

I trust this information furnishes answers to your questions.

Sincerely,

M. J. Ruley, Director
Vocational and Technical Education
P. O. Box 45208

MJR:d
cc: Dreessen
Beaty

2198

RE: Project Number 0-361-0123
Contract Number OEC-0-71-0530(361)

OKLAHOMA STATE EXEMPLARY PROJECT
TULSA PUBLIC SCHOOLS
REQUESTED PROPOSED BUDGET
1971-72 Line-Items FOR SECOND
YEAR BEGINNING DECEMBER 1, 1971

Original Budget Line Items	Description	Start 12/1/71
	100 ADMINISTRATION Salaries	$19,800.00
A-3----------	Local Project Coordinator & Supplemental Administration	13,000.00
I----------	Local Evaluating and Reporting	1,000.00
A-19----------	Clerical	5,000.00
D----------	Other Expenses (Supplies)	800.00
	200 INSTRUCTION Salaries	95,300.00
A-4 & 5----------	Vocational Counselor/Club Coordinator, Elementary	10,250.00
A-8----------	Vocational Counselor, Junior High	9,975.00
A-14----------	Vocational Counselor, Senior High	9,975.00
A-7----------	Craftsmen and Consultants	3,000.00
	Vocational Teachers (Salary and Extended Day)	47,500.00
A-13----------	Two Industrial Arts, Junior High, Part-time	
A-12----------	Two Home Economics, Junior High, Part-time	
A-18----------	One Business Education, Junior High, Full time	
A-16----------	One Home Economics, Sr. High,Full-Time	
A-16----------	One Industrial Education, Sr. High Full time	
A-17----------	One Vocational Teacher, Sr. High & Adult - Full time	
A-6----------	Club/Teacher Sponsors	4,000.00
	Stipends, Orientation, In-service (Not in original budget.	4,000.00
D----------	Supplies and Materials	6,000.00
	300 ATTENDANCE	
	400 HEALTH	
	500 TRANSPORTATION	1,000.00
C----------	Travel - Staff	
	Bus - Tours (Student) (Not in original budget, but needed)	

	600 OPERATION	100.00
E----------	Phone (stamps, etc.)	
	700 MAINTENANCE	500.00
D----------	Instructional Equipment	
	800 FIXED CHARGES	12,300.00
B----------	Employee Benefits, 11% actual Tulsa costs	
	900 CAFETERIA	
	1100 COMMUNITY SERVICE	
	1200 CAPITAL OUTLAY	2,000.00
----------	Instructional Equipment (not included in original budget)	
	TOTALS	$131,000.00
I----------	INDIRECT COSTS for Central Administration	4,536.00
G----------	Third Party Evaluation	6,000.00
	GRAND TOTAL	$141,536.00

PROPOSED BUDGET FOR EXTENSION OF PRESENT FUNDING
to December 1, 1971
SPECIAL VOCATIONAL EDUCATION - EXEMPLARY W-1

#	DESCRIPTION		TOTAL
100	ADMINISTRATION		$7,200.00
	Salaries		
	Local Project Coordinator	$4,000.00	
	Supplemental Administration	500.00	
	Evaluating and Reporting	400.00	
	Clerical	1,900.00	
	Other Expenses (Supplies)	400.00	
200	INSTRUCTION		
	Salaries		28,600.00
	Vocational Counselor/Club Coordinator, Elementary	3,500.00	
	Vocational Counselor, Junior High	3,300.00	
	Vocational Counselor, Senior High	3,300.00	
	Craftsmen and Consultants	1,500.00	
	Voc. Teachers (Salary and Extended day)	11,000.00	
	Club/Teacher Sponsors	1,200.00	
	Stipends, Orientation, Inservice	800.00	
	Supplies and Materials	4,000.00	
300	ATTENDANCE		
400	HEALTH		
500	TRANSPORTATION		
	Travel - Staff		450.00
	Bus - Tours (student)		
600	OPERATION		
	Phone		50.00
700	MAINTENANCE		300.00
800	FIXED CHARGES		4,500.00
900	CAFETERIA		
1100	COMMUNITY SERVICE		
1200	CAPITAL OUTLAY (Equipment)		2,000.00
		TOTAL	$43,100.00

AN EXEMPLARY COMPREHENSIVE OCCUPATIONAL ORIENTATION
VOCATIONAL EDUCATION PROGRAM IN THE TULSA PUBLIC SCHOOLS
In Cooperation With
THE STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION

The Career Orientated Educational Program

There is a vital need to relate school and careers. Many students feel alienated from school due to the inability to understand how their educational program will help them to achieve job and career goals later in life. The acquisition of communicative skills becomes more meaningful when related to real life settings. The Tulsa Public Schools' Department of Vocational Education, in cooperation with the State Department of Vocational and Technical Education, through the implementation of some of the new facets of the Vocational Education Amendment of 1968, is committed to helping education at all grade levels become more career oriented. Exemplary efforts are being made during grades 5-12 to provide students with the opportunity to gain a better understanding of the world of work and a desire to enter it. It has been found that even at early grade levels, the quality of educational achievement in communication is enhanced when coupled to real life situations related to work and the importance of a job in our society.

ELEMENTARY SCHOOL: Introduction to Occupations (World of Work) Grades 5-6

A program in eight elementary schools designed for all children in grades 5-6 to provide a basic understanding of various occupations, to develop the attitude that all honest work is honorable, and to motivate a desire for participation in the world of work.

At the fifth and sixth grade level a method useful in occupational orientation can be copied from the successful 4-H Club practices. Special interest clubs will be formed in each elementary school with appropriate projects related to occupational information. These clubs will involve businessmen, craftsmen, advanced vocational students, classroom teachers and parents in sponsoring roles. Special interest clubs such as horticulture, electricity, wild life conservation, small engines, sewing, drafting and design, and health career clubs are types of clubs that could be organized under the leadership of teacher-sponsors and club coordinator for this activity working out a definite schedule for meetings, format for meetings, and selecting teacher-sponsors for these local clubs which will meet after school at least once each week.

The basic guide will be, "A Guide for Developmental Vocational Guidance, Grades K-12," Oklahoma State Department of Education, (1968). The success of the 4-H Club concept is well known. There is reasonable expectation that it will serve well in vocational areas, although it may not have been

tried before. Vocational guidance curriculum materials (developed by Abington School District, Pa.) (ED 002 219) will be used in classroom activities to show students the processes through which career decisions may be made. The Counselor/Club Coordinator will work with teacher sponsors and principals in helping to develop a variety of activity packages for use in developing the club activities.

JUNIOR HIGH SCHOOL: Orientation and Exploration of Occupations - Grade 7

At the seventh grade level, all students should have an opportunity to learn about the jobs and careers available in the world of work. They should have an opportunity to be exposed to various careers so they will be able to decide if they are interested in exploring certain career clusters in more depth at a later time. The Career Orientation Programs are not aimed at decision-making but at providing all students with an opportunity to become exposed to as many different kinds of jobs and careers as possible over a one-year period as offered in seventh grade.

This is a program designed to provide all seventh grade students with an exposure to the jobs, careers, and professions in the world of work. It is a regularly scheduled curriculum in industrial arts, homemaking, and business education, included at the seventh grade level. All students should gain career orientation curriculum exposure in these practical arts subjects. The emphasis is upon student activity and use of resource persons so that students gain an understanding of all jobs and careers broken into large groups according to the Standard Industrial Classification. Career orientation curriculum units are taught by the teachers in the regular subject areas, namely, industrial arts, homemaking and business education. The program utilizes parents, business, industrial and professional persons in an advisory capacity. Two junior high schools are directly involved, but an effort is being made to give added emphasis to career orientation and exploration.

JUNIOR HIGH SCHOOL: Career Exploration - 8-9 Grades

New and innovative programs in participating schools designed to provide scheduled students in grades 8-9 with information and actual on-the-job experience in clusters of occupations have been initiated.

The Career Exploration Program at the 8th and 9th grade level, is a logical next step following career orientation in that it provides all students with an opportunity to explore in depth some job cluster areas: Construction and Manufacturing; Power, Transportation, and Service Occupations; Business, Office, Clerical and Sales; Home and Community Services and Health Occupations. This exploration will provide youth with a more realistic understanding of careers and a better knowledge base upon which to project sound decisions concerning preparation for a job.

Following the career exploration at the 8th and 9th grade, students would then become more selective. Some might select job preparation programs that could be offered through regular vocational education and cooperative vocational education programs. Others may prepare themselves for college and become prepared through the academic, baccalaureate degree route. Others may find that they need additional experience and an opportunity to

become adjusted to jobs. These students could then select special needs vocational education programs.

SENIOR HIGH SCHOOL: Cluster and Skill Training - 10th Grade (Central High School)

The skill training phase of the program is established at Central High School and is under the direction of vocational education teachers. The program is designed and schools designated so that pupils will feed from elementary school to junior high school and into this high school program. This will mean that many students entering this program at the tenth grade level will have had the introductory and exploratory experiences described in the preceeding phases. This two semester, two periods per day program will be devoted to some skill training in a cluster selected by the student as a result of his previous experiences in the program. At the outset, before the first feeder programs have been completed, most careful counseling will precede each student's selection of a cluster. (Construction occupations for boys, Home and Community Service occupations for girls.) The counselor is a key person in the success of the student and the program.

SENIOR HIGH SCHOOL: Cooperative and Regular Vocational Program - Grades 11-12

After students have completed their cluster skill training at the tenth grade level they will either go into regular cooperative or all day vocational programs in the local high school, or the area vocational school. Many of these students who might not have succeeded in the regular program under normal conditions might now, because of their participation in these exemplary programs through grade 10, be ready to move into the mainstream of vocational students. One of the aims of this program will be to prepare students for success in traditional training programs or on the job. It is felt by the teacher that when the student is ready, he will shift into the traditional program.

SENIOR HIGH SCHOOL: Cooperative Vocational Programs - Grades 11-12

These programs include Distributive Education, Diversified Cooperative Training, Cooperative Office Education, Agri-Business Cooperative, and Home Economics Job Training Cooperative. They are high skill in nature and include skill and technical-related instruction within the school coupled with job training plans and on-the-job supervision and coordination. In addition to these programs, many high skill programs include cooperative placement of students during their last semester prior to graduation and entrance to the world of work.

The exemplary cooperative program may be made available to students who still may not be able to compete in a regular program. Built on the Cooperative Education concept but offering a wider variety of training opportunities, this semi-sheltered work experience program would provide closely supervised on-the-job experiences in a number of training areas. Managers and supervisors would be used who have an understanding of the special problems of working with slower students. A plan in which an experienced person is encouraged to sponsor a trainee is in operation. The coordinator of these programs would be sensitive to students' needs

and employers' problems. The success of this phase will depend on the ability of the coordinators to convince business men to become a part of the training team for these most needy students.

SENIOR HIGH SCHOOL: Supplementary Training Programs - Grades 10-12

A number of short term intensive training programs may be developed to supplement the four phases of the integrated vocational program. They will be directed to meet the needs of two populations: (1) Those who drop out of school without a salable skill, and (2) those who near graduation and have not been exposed to vocational training.

An intensive six-weeks skill training program may be offered at a high school, an area school, or skill training center, for students who failed to enroll in school following the summer vacation. Students for these programs would be recruited through school records, local employment offices, and publicity from available news media--particularly through radio and television spot announcements. Programs to be offered would be based on student desires for training in critical skill areas where successful completion will lead to immediate employment. If there is a demand for them, a second series of programs could be offered in the spring for those who drop out during the school year.

A one-semester program may be offered to graduating seniors the second semester. This program would be only for those seniors who have not previously obtained vocational training. The program would incorporate the State required English course into a full-time vocational program held six hours daily. It would combine skill training in special public school class with on-the-job training during the last nine weeks. The program would only be offered in areas of critical demand by business and industry. An additional two-month summer program may be offered to graduated seniors in July and August if a demand is warranted.

Attached is the chart CAREER DEVELOPMENT CONTINUUM. It will be noted that students are involved in the elementary education world of work program integrated as a part of the 5-6 curriculum. It will also be noted that at the seventh grade, students will have the opportunity to observe jobs and careers broadly in regular practical arts courses.

This exemplary program has been developed so that it is equally as applicable to students who may enter a career at the highest level, as well as those students who may enter semi-skilled jobs. Programs are designed so that no commitment is made at the elementary world of work or career orientation level, but rather that students as a part of their regular educational program, will become involved in career oriented activities so that they will see education as a part of the preparation for life and work, rather than apart from it. The career exploration facet is again for all students and is developed at a depth whereby students can explore and learn in detail about certain job cluster areas that they may have been exposed to earlier. The purpose of this facet of the career development continuum

is to help youth gain the necessary experiences and understandings that will help them make a more accurate decision concerning their vocational goals. Their vocational goals may lead them toward enrollment in vocational education job preparation programs at the eleventh and twelfth grade level or it may direct them toward the vocational preparation programs offered at the college level. In all cases students progress through the career development continuum toward a job or career. In some cases youth would enter a job immediately upon graduation from high school. In other cases they might enter it upon graduation from a technical school or a college.

Approved: Dr. Bruce Howell
Assistant Superintendent
for Instruction

M. J. Ruley
Homer B. Towns
Frances W. Smith
Allie Dale Lambert
George Wright
Ralph Dreessen
Department of Vocational
and Technical Education

Exemplary Comprehensive
Occupational Orientation
Vocational Education Program
Tulsa Public Schools
Bulletin #2

GUIDELINES FOR OPERATING THE WORLD OF WORK PROGRAM IN ELEMENTARY EDUCATION: GRADES 5-6

Exemplary Program for Fiscal Year 1971-72
Department of Vocational Education

Need for and Purposes of the World of Work Education Program at the Elementary Level

Most students enrolled in present day elementary education programs have little opportunity to become acquainted with the world of work or to see any relationship between their classroom learning experiences and their future job or career.

The purpose of this program is to: (1) develop a respect for all work and (2) motivate all youth to want to participate in the world of work. Students should gain an awareness of the wide range of occupational opportunities available to them, a realization of how education helps to prepare for jobs and careers, and a feeling of respect for opportunities to earn a living. By incorporating into the elementary program procedures whereby each student will have exposure to and experiences with the world of work, he should gain a better understanding of work as a part of life, of its importance in our technological society, and of the wide spectrum of jobs and careers available.

Community involvement is essential to the program and can provide a secondary value to the World of Work Program - that of improved community-school relations.

Hopefully, this program will also contribute to improved academic education through increased student interest and motivation.

Program will provide for all students in grades 5 and 6 from eight elementary schools.

The elementary program will incorporate approximately 36 hours per year of world of work oriented activities and experiences for children in grades 5 and 6.

The basic guide will be, "A Guide for Developmental Vocational Guidance, Grades K-12," Oklahoma State Department of Education, (1968). The success of the 4-H Club concept is well known. There is reasonable expectation that it will serve well in vocational areas, although it may not have been tried before. Vocational guidance curriculum materials developed by Abington School District, Pa. (ED 022 219) will be used in classroom activities to show students the processes through which career decisions may be made.

2207

Local advisory groups will be used in building the program. This committee will include representatives from the following groups: (1) parents (2) teachers (3) administrators and (4) other community representatives.

Provisions have been made for inservice education of teachers.

Program evaluation procedures is to be developed as part of the program. The evaluation plan will provide for on-going as well as final end of year evaluation.

Special interest clubs built on the Extension Service concept will be the heart of this phase of the program. A vocational counselor/club coordinator is employed to plan and supervise the overall operation of the program. Clubs will be formed around the interest of 5th and 6th grade students in such areas as electronics, horticulture, cooking, drawing, etc. Special emphasis by the club coordinator and teacher sponsors will relate to career introduction and acceptance. Teacher-sponsors are used for after school work with students in the club program, along with volunteers, which includes businessmen, craftsmen whose work is closely related to the interest of the group, or high school vocational students with assistance of parents and teachers.

Approved: Dr. Bruce Howell
Assistant Superintendent
for Instruction

M. J. Ruley
Homer B. Towns
Frances W. Smith
Allie Dale Lambert
George Wright
Ralph Dreessen

Exemplary Comprehensive
Occupational Orientation
Vocational Education Program
Tulsa Public Schools
Bulletin #3

CAREER ORIENTATION PROGRAM
for
SEVENTH GRADE STUDENTS

Choosing a vocation is more difficult for today's young people than it has been for any other generation. There are thousands of different jobs and careers from which to choose. In the traditional programs of our educational institutions today, the student has no opportunity to get a personal acquaintance with more than one or two jobs, if indeed he has that opportunity. The child of today rarely has a first-hand opportunity to observe the industrial processes which produce the products of our society. These products and processes are the foundation of the wealth and technological development of our country. The rapid development of this technology, the increase of occupational specialization, the development of man's interdependence socially, economically, and vocationally has created a need for career guidance and exposure.

Our present educational programs provide little opportunity for students to gain a realistic understanding of various jobs and careers. Youth must have an opportunity to learn about our technological society. They need to learn about jobs and careers so that they have information necessary for establishing job goals in later years.

Junior high or middle school aged youth usually have a very sketchy idea of a few visible careers such as doctor, lawyer, or astronaut. Although they are bombarded by the mass media, their knowledge of jobs in terms of wages, working conditions and opportunity for advancement is limited. The early adolescent is interested in his future work. The role of work is a major portion of a person's life in our society. In a Career Orientation and Exploration Program, it is hoped that through an organized program of student-centered activities, the student will be exposed to a large range of jobs and careers. The Career Orientation concept is to introduce the middle school youth into the world of "working" occupations. The exposure of students to these occupations will broaden the student's knowledge of the world of occupations and present this relationship to his job goals.

A program ov Career Orientation should be more than compartmentalization of occupations. Compartmentalization thus far has always meant that occupations were taught by either a guidance counselor or the industrial arts teacher. Occasionally, when it seemed "appropriate," other disciplines would present career information when it could be related to the subject under discussion. In many of these instances only those "glamorous" occupations were given attention. Students were not actually exposed to jobs or to a group of jobs. In most cases, job exposure was minimal or only related to a few professional, industrial, or business careers. This particular method limited the broadening of the student's understanding of job goals. To reorient our educational system to the needs of youth in a

technological society, our traditional program of education must be altered and become more relevant to the world of work. Our schools must offer an integrated program with the job and career goals of students as the central core.

The Career Orientation Program will present to students:

1. A more adequate knowledge of our technological society and jobs and career alternatives.

2. A knowledge of the economics necessary for participating in a technological society.

3. A knowledge of the kind of education or training required and work traits necessary in obtaining employment and gaining success in jobs and careers.

4. A self-appraisal regarding personal skills, abilities, and life aspirations.

5. An opportunity to develop attitudes toward the world of work which enables a person to fulfill his job career goal.

6. An opportunity to develop an attitude that socially useful work has dignity and worth and is necessary as a part of an integrated socio-economic system.

To make a job career choice from the widest range of occupational information, a program must permeate the student's entire schedule.

The practical arts teacher has a certain group of jobs and careers that they are responsible for teaching. This teaching includes extensive use of resource personnel and field trips, as well as the use of instructional materials, filmstrips, and other career oriented media. The first week of each semester will be devoted to lead in preparation which will include class discussion, study groups, projects, displays, orientation and jobs related to study areas. The second week will include parent involvement as resource persons in the professions such as: law, medicine, engineers, educators, business executives, business parents, industrial parents, and trade parents. Resource persons are to be invited into the schools from business, industry, and the services. They will come to the school and be a part of a planned session for the various classes. Field experiences are to be scheduled when possible to cover some of approximately 200 different jobs, careers, and professions. The planning of field trips and resource personnel are to be conveniently concentrated during the semester. In such an effort, close program coordination and organization is cardinal.

An effective Career Orientation Program requires an intensive planning process in order to develop an integrated program of occupational information and core materials. Many means of exposure to jobs and careers are possible through the seventh grade year. Examples of means of exposure are: Agriculture; Business; Construction and Manufacturing; Distribution

and Marketing; Services: 1. Personal, 2. Repair; Transportation. Field trip experiences emphasize learning about the kinds of jobs and careers in work world. The students would have an opportunity to see and talk with workers. They would be involved in assignments that would cause them to gain an understanding of working conditions, opportunities for advancement, and other benefits of various jobs.

The organization of the Career Orientation Program includes intensive direction by the school principal, practical arts, vocational department and project coordinators. Leadership in helping the teaching staff to plan and develop curriculum is vital to its success. The local administrator involves the guidance department and others in planning the total curriculum. In the local planning process parent groups, as well as business and industrial representatives, are involved.

The Career Orientation Program is operated in the regular practical arts curriculum in cooperation with the total staff. One of the requirements is that a minimum of 180 hours of regularly scheduled career orientation curriculum activities be provided over a one-year period. This means that each seventh grade student, during their one year in this grade, would receive a minimum of 180 hours of career exposure. It also means that every seventh grade student would have an opportunity to learn about all jobs and careers regardless of whether they were going to be a skilled tradesman or a professional person. The objective is not that they would make a commitment in terms of selecting a career, but that they have an exposure to as wide a range of opportunities as possible, so that later they may be able to have a better base upon which to make a selection.

A vital component of program development is involvement of the total teaching staff in an inservice education activity. The schools that are approved for programs need to conduct teacher inservice workshops so that adequate time is available for reorganization for the curriculum and the development of the program. The local schools are encouraged to use their staffs and other community personnel in the development of materials. The resources of existing vocational education instructional materials laboratories will be made available in preparing materials. Vocational teacher educator services are available to school staffs as they conduct inservice education workshops.

REQUIREMENT FOR CURRICULUM PLANNING

For example, the teacher would arrange for a significant block of time devoted to the curriculum blocks in the seventh grade. At least 180 clock hours would be devoted to career orientation regularly scheduled over a one-year period of time. Provisions would be made for regularly scheduled curriculum blocks that would include student activities and experiences related to understanding job opportunities in: Construction and Manufacturing, Business, Distribution and Marketing, Personal, Home, Community, Community, and Health Services, Power, Transportation and Service Occupations. It is noted that the Standard Industrial Classification is to be broken into groups. It is recommended that all levels of employment, i.e.: skilled, managerial, technical, and professional be included as a part of each group.

Emphasis should be placed upon using resource people from the community in agriculture, business and industry, as a means of helping students learn about career opportunities. Numerous field trips to observe jobs should be planned. The real world of work should serve as a part of the laboratory for orientation of careers.

Each of these suggested curriculum block areas should be scheduled so that the students would be in all areas sometime during the seventh grade year of the practical arts curriculum.

The career orientation curriculum blocks would be taught by teachers in existing curriculum areas of the practical arts. For example, industrial arts would handle construction and manufacturing, etc.

NOTE: Vocational education facilities and programs that are available, should be utilized in the orientation program. Industrial arts, social studies, science areas and others can offer curriculum blocks.

Approved: Dr. Bruce Howell,
Assistant Superintendent
for Instruction

Vocational Education
Tulsa Public Schools
August 30, 1971

POLICIES AND PROCEDURES FOR THE CVET/EXEMPLARY PROGRAMS

All equipment purchased locally or by the State purchasing department for this program, is the property of the State of Oklahoma (Vocational and Technical Education Department). All supplies and other supportive services are being funded 100%.

Equipment inventories and lists of supplies have been developed and copies will be provided for each teacher, with a master copy being kept in the vocational department office.

Class records, including lists of students; if they transfer, where to; hours taught; and other necessary information will be requested from time to time. Equipment and supplies needed for the classroom may be submitted each month. Requests for supplies and/or equipment should be submitted to the Vocational Office. (Do not initiate requisitions through your school office as we will group orders into larger orders.) Needs for supplies should be anticipated at least two weeks in advance, as it may require this much time (and sometimes more) for processing.

A list of companies or business establishments that will be available for possible visitation will be compiled.

Requisitions through your school office for busses to be used in making field trips should be scheduled with plenty of time for processing. The time of day in requesting a bus should be considered, as school busses will not be available when they are transporting students to or from school at the beginning and close of the school day.

Instructional materials have been and will continue to be developed by individuals, group sessions and the State department. As units and materials are developed or received they will be sent to you.

NO CHARGES are to be made to students. If items are produced for sale, a system of resale accounts will need to be established. (See policy and and procedure for deposit of moneys, etc.)

Tape recorders, overhead projectors, and other such equipment has been purchased for use by teachers in the CVET program. Please arrange for storage facilities for materials and equipment in each school so that those concerned will be aware of the plans.

Please keep your records - equipment, supplies and materials - as accurately as possible as we will make periodic evaluations and a final evaluation at the close of the school year.

We will need to continually develop instructional materials, employ new methods and techniques as we work with the students enrolled in the program. The following items are for review:

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a. Laboratory and shop experiences to be scheduled for two (2) consecutive periods.
b. Twelve (12) to eighteen (18) students in separate groups of handicapped or by separate groups of disadvantaged. (Please refer to the definitions that were furnished at the start of the program.)
c. Teachers of this project are certified in Industrial Arts, Home and Family Living, and Business Education. Some have vocational certification.
   (1) Nine months regular contract for junior high schools and ten month vocational contract for senior high school teachers.
   (2) Extended day of one hour with group, or planning hour and other hour preceding or following (i.e., 5th and 6th periods or 1st and 2nd, etc.)
   (3) May be a part of regular five period schedule with no extended day.
   (4) Extended day instructors will receive extra pay as approved for time above regular contract.
   (5) Planning period to be made up before or after scheduled class day.
   (6) Stipends to be paid personnel in the project for curriculum development, inservice training or other scheduled sessions not a part of a regular schedule.
   (7) Teachers from the practical arts may be used with the judgement of the local administration as to ability of the teacher to conduct a program as specified.
   (8) Proper facilities for the teaching of this program, both laboratories and shops, is needed to conduct this program.
   (9) Credit for two hours to be given in "Career Exploration, 'CVET'", Industrial Arts, Homemaking, Business Education or vocational as applies for this program.

The central office will make every effort to help teachers carry out individual and program plans.

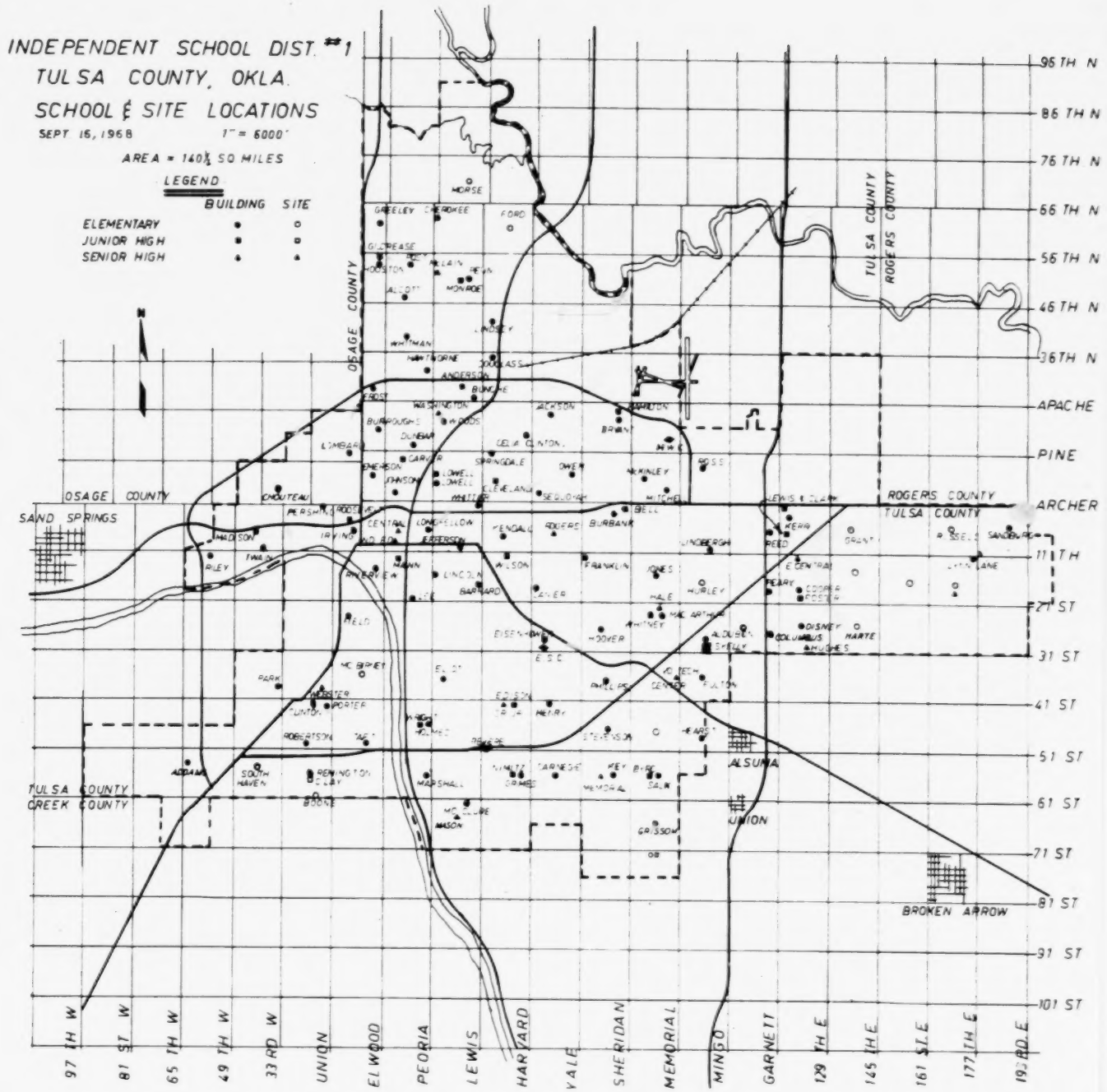
We need lead time to process requests for supplies and items needed for the various projects.

Meetings on Saturdays, with a stipend, will be held as in the past when there is need. A record of each teacher's extra time will be requested for payroll purposes at each scheduled pay period.

Our first meeting is scheduled for Saturday, September 25, 1971, from 8:30 to 11:30 a.m., in Room 601 at the Education Service Center.

If you have questions concerning the program, contact the following:
George Wright - Local Project Coordinator,ESC 308, Ph.743-3381,ex. 319
M. J. Ruley - Director Vocational Education,ESC 308, 743-3381,ex. 318
Homer Towns - Assistant Director, ESC 308, 743-3381, ex. 318, 319
Frances Smith - Supervisor Home and Family Life,ESC 322, ex. 357
Allie Dale Lambert - Supervisor Business Education, ESC 324, Ex. 346

Approved: Dr. Bruce Howell
Assistant Superintendent for Instruction


INDEPENDENT SCHOOL DIST. #1
TULSA COUNTY, OKLA.
SCHOOL & SITE LOCATIONS
SEPT 16, 1968
1" = 6000'
AREA = 140½ SQ MILES
LEGEND
BUILDING SITE
ELEMENTARY
JUNIOR HIGH
SENIOR HIGH
OSAGE COUNTY
TULSA COUNTY
ROGERS COUNTY
CREEK COUNTY
SAND SPRINGS
BROKEN ARROW
ALSUMA
UNION
96 TH N
86 TH N
76 TH N
66 TH N
56 TH N
46 TH N
36 TH N
APACHE
PINE
ARCHER
11 TH
21 ST
31 ST
41 ST
51 ST
61 ST
71 ST
81 ST
91 ST
101 ST
97 TH W
81 ST W
65 TH W
49 TH W
33 RD W
UNION
ELWOOD
PEORIA
LEWIS
HARVARD
YALE
SHERIDAN
MEMORIAL
MINGO
GARNETT
129 TH E
145 TH E
161 ST E
177 TH E
193 RD E

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School Facts and Figures

AREA OF SCHOOL DISTRICT

The Tulsa school district contains 140.5 square miles.

POPULATION OF DISTRICT

Approximately 333,296 persons live in the school district. Of this total, 82,596 are boys and girls age five through 18.

NUMBER OF SCHOOLS IN OPERATION

ELEMENTARY	79
JUNIOR HIGH	19
SENIOR HIGH	9
TOTAL	107

Also a Vocational-Technical Center

SCHOOL CONSTRUCTION PLANNED OR UNDER WAY

(As of September, 1971)

Buildings in various stages of construction or planning include a new senior high school; a new junior high school; two new elementary schools; replacement of an elementary school; and additions to a senior high school, three junior high schools, and two elementary schools.

SCHOOL SITES IN RESERVE

The school district owns 18 school sites where buildings are not immediately planned.

TEACHER SALARY SCHEDULE

Degree	Minimum	Maximum
BACHELOR'S	$6400.00	$ 9536.00
MASTER'S	$6912.00	$10,624.00
MASTER'S PLUS 30	$7424.00	$11,712.00

NET COST PER PUPIL (1970-1971)

In 1970-1971 the net cost per pupil in average daily attendance in the regular day-school program, excluding capital outlay, was $607.65.

MEMBERSHIP (END OF FIRST QUARTER)

Year	Kindergarten and Elem.	Junior High	Senior High	Total
1971-1972	40,745	17,524	16,411	74,680
	(End of Second Week, September, 1971)			
1970-1971	42,781	18,172	16,423	77,376
1969-1970	44,511	18,550	16,505	79,566
1968-1969	45,441	18,655	16,020	80,116
1967-1968	45,599	18,400	15,523	79,552
1966-1967	45,294	18,185	14,810	78,289
1965-1966	45,185	17,308	14,620	77,113
1964-1965	44,638	16,783	14,387	75,808
1963-1964	43,718	16,019	13,807	73,544
1962-1963	43,320	15,573	12,524	71,417

NUMBER OF HIGH SCHOOL GRADUATES

1971	4901
1970	4813
1969	4501
1968	4438
1967	4192

HIGH SCHOOL GRADUATES ATTENDING COLLEGE

A follow-up study of the Class of 1970 shows that 56.3% of these students enrolled in colleges or universities. An additional 6.3% attended other types of special schools.

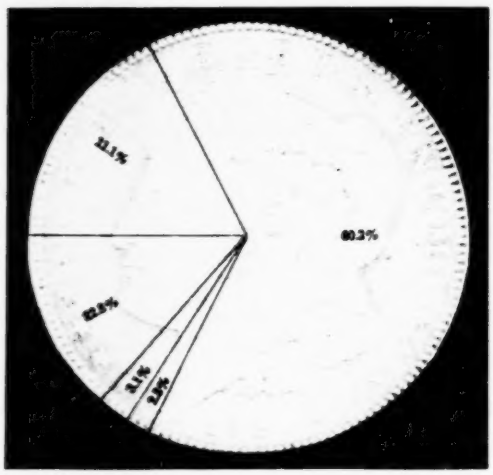
STUDENT SCHOLARSHIPS

Each year's graduating seniors earn scholarships valued at approximately $1 million for attendance at nearly 200 in-state and out-of-state colleges and universities.

EDUCATIONAL STAFF

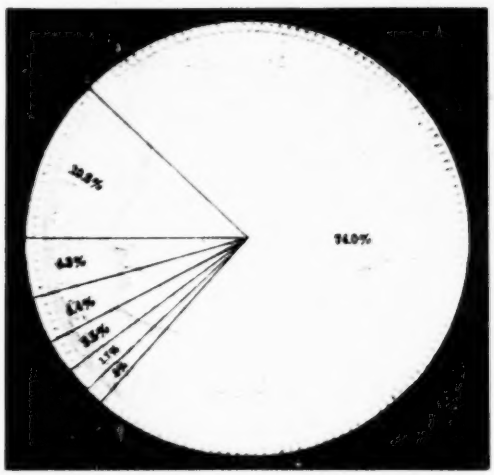
There were approximately 3600 employees on the educational staff of the Tulsa Public Schools as of May, 1971.

SOURCES OF INCOME FOR 1970-1971



Ad Valorem, Intangible, and Mortgage Taxes	60.2%
Auto License Fees	11.1%
State Aid	22.8%
Federal Aid	3.1%
Other	2.8%

EXPENDITURES FOR 1970-1971



Instruction	74.0%
Operation of Plant	10.8%
Maintenance of Plant	4.8%
Fixed Charges	4.4%
Administration	3.5%
Auxiliary Services	1.7%
Property Re-evaluation	.8%

Income and Expenditures for Adult Education, Summer School, Elementary and Secondary Education Act Projects, and Capital Outlay are not included above.

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SECONDARY EXEMPLARY PROGRAM 1971-72 Vocational Education Tulsa Public Schools	Enrollment	Room Number	No. of Regular Hours taught per day	No. of Exemplary hours taught per day	No. of Extended hours per day	Planning Period	Total hours per day	Exemplary begins	Exemplary ends	Extended Day	Exemplary percent of contract
Central High School 212 E. 6th 587-2426 Principal - Gene Tucker Asst. Principals: Larry Alexander Joyce Saunders											
Iwannah Lusty	13 15 11	412	6	6	0	0	6	8:00 10:40 1:35	10:35 1:30 2:45	0	100%
Eugene Williams	9 17 15	I.E.11	6	6	0	2	6	7:20 10:40 1:35	9:30 1:30 2:45	0	100%
Horace Mann Junior High 112 E. 11 - 587-5574 Principal - Jack Pontious Assistant Principal- Gerald Hicks											
Patricia Carson	16	15	4	2	1	0	6	12:50	2:45	yes	1/6
Joe Eastham	16	20	4	2	1	0	6	12:50	2:45	yes	1/6

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	Enrollment	Room Number	No. of Regular Hours taught per day	No. of Exemplary hours taught per day	No. of Extended hours per day	Planning Period	Total hours per day	Exemplary begins	Exemplary ends	Extended Day	Exemplary percent of contract
Roosevelt Junior High 1202 W. Easton 587-9438 Principal - Carl Kime Assistant Principal - Ronald Hunt											
Betty Parker	10 13 15	314	6	6	0	0	6	9:00 11:49 2:04	10:50 1:59 3:45	0	100%
James Gray	15	113	5	2	1	0	7	10:57	1:06	yes	1/6
Frankie Roemer	16	106	5	2	1	0	7	10:57	1:06	yes	1/6

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EXEMPLARY ELEMENTARY PROGRAM — VOCATIONAL EDUCATION — Tulsa Public Schools

School	Principal	Sponsor	Enrollm't.	Meeting time	Day	Room
Irving-18 N. Maybelle 582-4188	Wilma Burleson	Karen Tyner	24	3:00-4:00 p.m.	Wednesday	12
Jefferson-808 S.Wheeling 587-4451	Naomi Wilkerson	Garry Nichols	27	3:00-4:00 p.m.	Thursday	4
Johnson-507 E. Easton 587-8119	Harry Griggs	Don McGowan	50	3:00-4:00 p.m.	Wednesday	Elem. Ind. Educ.
Lincoln-1515 S. Peoria 587-2591	John Cagle	Sara Abel Helen Bailey	52	3:00-4:00 p.m.	Thursday	1 2
Longfellow-1240 E. 5 Pl. 587-7281	Naomi Wilkerson	Ruth Huggins	22	3:00-4:00 p.m.	Wednesday	5
Lowell - 1006 N. Quaker 587-0111	Marolyn Hunnicutt	Steve Wigginton	25	3:00-4:00 p.m.	Wednesday	15
Pershing-1903 W. Easton 587-6725	Pearl Henley	Eunice Copeland	30	3:00-4:00 p.m.	Wednesday	11
Riverview-512 W. 12 584-2651	James Sturdivant	Helen White	22	3:00-4:00 p.m.	Wednesday	4

Director - Vocational Education — M. J. Ruley — Room 308, E.S.C. — 743-3381, Ext. 318
Project Coordinator — George D. Wright — Room 308, E.S.C. — 743-3381, Ext. 319

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PROJECT COORDINATOR
(12 months)
Exemplary Comprehensive Occupational Orientation Vocational Education Program

The PROJECT COORDINATOR shall meet the requirements of a local director as set forth in Policies and Procedures Manual for State Board for Vocational Education. These requirements are as follows:

a. Minimum Qualifications:
A degree from a standard four-year college approved for teacher training with a major in a vocational education field and two or more years of teaching experience in an approved vocational education program. They shall hold a valid teaching certificate or credential in a specified vocational field, and preferably should have competency sufficient to direct and assist in the area of vocational guidance and counseling.

b. Duties and Responsibilities:
1. Supervise the project and project direction
2. Control the budget
3. Order materials and equipment
4. Develop and organize the inservice program
5. Collect evaluation data
6. Maintain all project records
7. Complete state and local reports as requested
8. Assist teachers and coordinators in developing and implementing a relevant curriculum.

c. Compensation:
Salary determined by qualifications and experience in conformity with Tulsa's schedule and the Oklahoma State Plan for Vocational and Technical Education and as called for in proposal for Exemplary Program. Anticipated salary range $9,000.00 to $11,000.00. This salary is paid with 100% vocational funds through direct commissioner grant to the State Department of Vocational and Technical Education and assigned to the Tulsa Public Schools Department of Vocational and Technical Education.

VOCATIONAL COUNSELOR
Exemplary Comprehensive Occupational Orientation Vocational Education Program

Secondary (one (1) Junior High, one (1) Senior High) (9½ months)

a. Minimum Qualifications:
Shall meet the requirements of the State Board of Vocational Education, as set forth in the State Plan: "shall have a valid standard counselor's certificate as required for local school counselors." (The Oklahoma State Board of Vocational and Technical Education has entered into a cooperative agreement with the Guidance and Counseling Division of the State Department of Education for a coordinated program of vocational guidance and counseling for the State). A background of information and experience in the World of Work will be required.

b. Duties and Responsibilities:
1. Assist in student testing, selection and scheduling in programs.
2. Follow-up on students as they progress in the Career Development Program.
3. Identify students for succeeding programs.
4. Assist in evaluation procedure
5. Work with teachers in identifying students with special needs.
6. Provide consultative services concerning the vocational aspects of guidance.
7. Develop, secure and distribute occupational information.
8. Assist with curriculum development.
9. Participate in inservice meetings.

c. Compensation:
Salary determined by qualifications and experience in conformity with Tulsa's schedule and the Oklahoma State Plan for Vocational and Technical Education and as called for in proposal for Exemplary Program. Anticipated salary range $8,362.50 to $9,500.00. This salary is paid with 100% vocational funds through direct commissioner grant to the State Department of Vocational and Technical Education and assigned to the Tulsa Public Schools Department of Vocational and Technical Education.

EXEMPLARY PERSONNEL

Program Coordinator	George D. Wright	Education Service Center
Senior High Vocational Counselor	Daryl Browning	Central High School
Junior High Vocational Counselor	Dewey Martin	Roosevelt Jr. High
Elementary Vocational Counselor/Club Coordinator	LaVonne Hunter	Irving Elementary
Regular Program	John Duncan	Central High School Industrial Educ. Bldg.
Home and Community Services	Iwannah Lusty	Central High School
Building and Construction Trades	Eugene Williams	Central High School Industrial Educ. Bldg.

Junior High Instructors

Patsy Carson		Horace Mann Junior High
Joe Eastham		Horace Mann Junior High
Jim Gray		Roosevelt Junior High
Betty Parker		Roosevelt Junior High
Lucille Davis	Regular Program	Roosevelt Junior High
Peggy Harrison	Regular Program	Roosevelt Junior High
Hoyt Hyden	Regular Program	Roosevelt Junior High

Elementary Club Sponsors:

Sara Abel	Lincoln Elementary
Helen Bailey	" "
Eunice Copeland	Pershing Elementary
Ruth Huggins	Longfellow Elementary
Don McGowan	Johnson Elementary
Garry Nichols	Jefferson Elementary
Karen Tyner	Irving Elementary
Steve Wigginton	Lowell Elementary
Helen White	Riverview Elementary

ADMINISTRATIVE PERSONNEL:

M. J. Ruley, Director, Industrial Education, Vocational and Technical Education
Homer B. Towns, Assistant Director
Allie Dale Lambert, Supervisor, Business Education
Frances W. Smith, Supervisor, Home and Family Living

CONSULTANTS AND ADVISORY COMMITTEE:

Dale Edmonds, Director, Elementary Curriculum
Dr. Mary Joe Keatley, Director, Psychology and Testing
J. J. Morton, Administrative Director, Elementary Education
Sydney Powell, Director of Guidance
Lyle O. Young, Instructional Research Assistant
Principals: Wilma Burleson, John Cagle, Harry Griggs, Pearl Henley, Marolyn Hunnicutt, Carl Kime, Jack Pontious, James Sturdivant, Gene Tucker, James Scott

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STUDENT HANDOUTS

CONSUMER EDUCATION

Buy Now Pay Later
Budgeting
Banking

BUSINESS ETIQUETTE

Hindrances to Good Grooming
Telephone Tactics
Getting Along on the Job
Developing Personality Potential

GUIDANCE

Know Yourself
Job Benefits
Going on a Job Interview
Employer Expectations
Importance of School Records
Employment Agencies
Time Cards
Social Security Card
Learning About Salary and Fringe Benefits
Filling Out an Application

HOME, COMMUNITY AND HEALTH OCCUPATIONS

Food Service and Safety
Food Service Occupations - Short Orders
Clothing Services - Unit I, Unit II and Unit III
Vocational and Home Nursing
Detergents
3 Basic Functions of Detergents
What Do We Wash
Let's Make a Hang Tag
Soaps
Lot's About Laundersing
The Clothes Wear
Let's Clean House
Use a Work Schedule
Housekeeping Tasks
Cleaning Equipment
Use of Work Schedule - Quiz 1
Use of Work Schedule - Handout #1
Kitchen Cleaning - Quiz 2
Cleaning The Living Areas - Quiz 3
Cleaning The Living Areas, Quiz 4
Cleaning The Living Areas - Quiz 5
Cleaning the Bathroom Areas - Quiz 6
Accidents and Safety - Quiz 7

CHILD CARD

Feeding, Bathing and Laundry
Orientation to Child Care
Behavior and Discipline
Creative Activities
The Baby-Sitters Pledge
Vocabulary
Helpful Hints for Baby-Sitters and What Is It?
Rate Yourself As a Child Care Employee
Bulletin Board Ideas

UNITS DUPLICATED IN LOCAL OFFICE AND DISTRIBUTED

CONSTRUCTION

Unit I-A. Building Wall Sections

Unit I-B - Drywall Installation

Unit IV - Drafting, Basic Measurements

GUIDANCE

Unit I - Class Orientation

Unit II - School Orientation

MANUFACTURING

Unit IV - Production Line Work

POWER AND TRANSPORTATION

Unit V-B - Strokes of a 4-Cycle Engine

Unit IX - Body Fender Repair

BUSINESS, CLERICAL AND SALES OCCUPATIONS

Unit V - Secretary and Stenographer

HOME, COMMUNITY AND HEALTH OCCUPATIONS

Unit XIV - Knowledge, Operation, and Safety of the Sewing Machine

Unit I - Orientation to Food Service Industry

Unit III-B - Waiter or Waitress (for the slow learner)

Unit I - First Aid

Unit II - Home Nursing

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UNITS TO BE DUPLICATED AND DISTRIBUTED

CONSTRUCTION

Unit III-A - Electrical House Wiring

MANUFACTURING

Unit V - Furniture Re-finishing

SERVICE OCCUPATIONS

Unit I-A - Replacement of Electrical Appliance Cord

FOOD SERVICE INDUSTRY

Unit II - Job Analysis

Unit III-A - Waiter or Waitress

GUIDANCE

Unit I - Finding a Job

Unit II - Going for a Job Interview

Unit III - Using Banking Services

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Special Vocational
Education
Tulsa Public Schools
Exemplary-Elementary

S.R.A. WIDENING OCCUPATIONAL ROLES KIT (W.O.R.K.) FOR GRADES 6-9

CONTENTS

Five (5) S.V.E. Educational Filmstrips

The filmstrips are excellent to use to promote class discussions. The teacher's guide provides discussion material.

Number	Title	Pages in Guide
A778-1	Who Are You?	5-11
A778-2	What Do You Like to Do?	12-17
A778-3	What is a Job?	18-24
A778-4	What Are Job Families?	25-31
A778-5	What Good is School?	32-37

Five (5) Junior Guidance Series Booklets

These booklets may be used as a reference by the sponsor or by individual students. The students must be able to read comfortably at the sixth grade level to read them independently.

Reorder Number	Title
5-731	All About You Your Abilities
5-732	Getting Along in School The Job in Your Future Making Your Study Hours Count

35 W.O.R.K. Student Record Books

1 Teacher's Guide

400 Occupational Briefs (Divided into three (3) main groups - People, Things, Ideas

Each brief presents a short fictional narrative that describes a typical person at work in the occupation presented. The narrative depicts typical activities of the worker and some psychological aspects of the job.

Occupational information is given in capsule form. Topics covered are: required education, useful high school courses, special training or college courses (where applicable), where jobs are found, getting started, training on the job, getting ahead, earnings, number of hours, numbers of workers and future manpower requirements.

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ADDITIONAL FILMSTRIPS

THE EDUCATION SERVICE CENTER HAS THE FOLLOWING FILMSTRIPS THAT ARE GOOD FOR ELEMENTARY STUDENTS

One series is entitled The Working Series, AVID Corporation - 6 filmstrips and four (4) records.

Another good set of filmstrips is Working World, The. It is a filmstrip with tape. There are two series. The titles of the individual filmstrips are listed below and the number of the filmstrip when known.

1. Working in a Hospital
2. Working in a Laundry and Dry Cleaning Plant
3. Working in Our Town
4. Working in the City
5. Working with Cars SF 671
6. Working with People SF 670
7. Jobs for Young Men SF 672
8. Clerical and Stock Work SF 669
9. The Job Interview SF 666
10. Finding a Job SF 665

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ADVISORY COMMITTEE SUGGESTIONS

Daryl Browning

1.	Mrs. Vicent Gorton -	747-0724	Parent of a student in Mrs. Lusty's class
2.	Mrs. Nancy Reed	583-9348	P.T.A. officer at Central
3.	Mrs. S. J. Mayfield	742-6038	P.T.A. officer at Central

Dewey Martin

1.	Orville Stinnett	584-2651	Adult Basic Ed. office
2.	Mrs. Jan Novak	743-9741, Ext. 61	
3.	Jim Colgan	583-8111	State Federal Savings & Loan Association

LaVonne Hunter

1.	Dr. Richard Hall	939-6351, Ext. 342	Univ. of Tulsa
2.	Jim Dillinger	583-6161	Oklahoma Natural Gas Co.
3.	Mike Norris	582-9301	Irving P.T.A. President
4.	Donna Neal	743-6830	Lincoln P.T.A. President
5.	J. C. Neal	587-3358	Business Agent for Teamsters Union
6.	Mrs. Patricia Budnick	936-6180	Jefferson P.T.A. President
7.	Mrs. Aurora Veale	583-7670	Pershing P.T.A. President
8.	Mrs. Harry Holt	582-7925	Riverview P.T.A. President
9.	Charles Needham	585-6911	Personnel of Southwestern Bell Co.
10.	Mrs. Dinger	585-6911	Southwestern Bell Co.
11.	Willard Lewis	583-5261	Laborers Local #120
12.	Gerald Ellis	835-6974	Operating Engineers #627
13.	Clayton Walker	835-6974	Operating Engineers #627
14.	John Forrest	628-0410	Carpenters Local #943
15.	Bob Vanderford	628-0410	Carpenters Local #943

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EXEMPLARY ADVISORY COMMITTEE

1971-72

These people serve in the capacity of advisors as stated in the Proposal:

SENIOR HIGH

Mrs. Nancy Reed	583-9348	P.T.A. officer at Central High School

JUNIOR HIGH

James Colgan	583-8111	State Federal Savings & Loan Association

ELEMENTARY

James Dillinger	583-6161	Oklahoma Natural Gas Co.
Mrs. Alnoma Dinger	585-6250	Southwestern Bell Telephone Co.
John Forrest	628-0410	Carpenters Local #943

ALTERNATES

Will serve if called upon

Glen Leak	425-0484	Cement Finishers Local #690
Melvin Winegarten	939-5471	Electricians Local #584 542 S. Lewis P. O. Box 50313

2229

Irving Elementary School, Room 21
18 North Maybelle
Tulsa, Oklahoma 74127

_____
Date

_____
_____
_____

Dear _____:

The Tulsa Public Schools have implemented an Exemplary vocational program called the "World of Work". The purpose of this program is to develop a respect for all work and motivate all youth to want to participate in the world of work. The fifth and sixth grade students involved in the program hopefully will gain an awareness of the wide range of occupational opportunities available to them, a realization of how education helps to prepare them for jobs and careers, and a feeling of respect for opportunities to earn a living.

We have eight elementary schools, two junior high schools and one senior high school involved in the program. The eight elementary schools have teacher sponsored club meetings, one evening a week after school from 3:00 p.m. to 4:00 p.m. The club activities expose students to a variety of occupations.

We need VOLUNTEERS including businessmen, craftsmen, technicians, and professionals, whose work is closely related to a variety of interests of the group, who will come to the schools and share their work experiences with the clubs. Volunteer speakers need not prepare a formal speech. It is sufficient that they simply talk to the children and try to answer questions that the children may have. The attached sheet offers some suggestions that may prove helpful to speakers.

We also want to arrange field trips to businesses, plants and firms where children are able to actually observe people at work.

If your company can help us either by allowing us to tour or by providing a speaker or speakers for any of the schools, we would be most appreciative.

Sincerely,

Approved: J. J. Morton,
Administrative Director
for Elementary Education

LaVonne Hunter
Elementary Counselor/Club
Coordinator
World of Work Club, Exemplary
Vocational Program

2230

A LIST OF SUGGESTIONS

Some questions that the children might ask a speaker are:

What qualifications do you need for the job?
What type of training did you have? How long did you train?
What are the duties involved?
What hours do you work?
What tools do you use? What equipment must you know how to operate?
What is the pay?
What are the chances for advancement?
What are the advantages and the disadvantages of the job?
What type of personality is best suited for the job?
What interested you in that type of work to begin with?
What are some of your outside interests? (Example: sports, music, etc.)
Did school relate to your job? How? What skills did you learn in school that you use in your job? (reading, math, etc.)

Perhaps the following list might be kept in mind when relating to the children about getting and keeping a specific job:

Punctuality	Personality
Regular attendance	Cheerfulness
Skills	Appearance
Aptitude	Cooperation
Experience	Communication
Education	Pride
Honesty	Cleanliness

We hope that the children involved in this program will realize:

1. Pride in one's work makes life much happier and adds purpose.
2. They can <u>choose</u> an occupation that they will <u>enjoy</u>.
3. It is necessary to be able to get along with other people no matter what job they do.

2231

SPEAKERS

Below are some suggestions for speakers. If you are interested in particular ones please put a check in the box under the name of your school. If any of the students are interested in other occupations please add them to the list.

	Irving	Jefferson	Johnson	Lincoln	Longfellow	Lowell	Pershing	Riverview
Abestos workers								
Boilermakers								
Bricklayers								
Carpenters								
Carpet & linoleum workers								
Cement Finishers								
Electricians								
Elevator constructors								
Laborers								
Operative Plasterers								
Operating Engineers								
Painters								
Pipe Fitters								
Plumbers								
Roofers								
Sheet Metal Workers								
Barbers								
Meat Cutters								
Musicians								
Truck Drivers								
Nursery Workers								
Shoe repairmen								
Upholsterers								
Attorney								
Doctor								
Florist								
Radio technician								
Television Repairman								
Telephone Operator								
Stewardess								
Counselor								
Nurse								
Pilot								
Dental Assistant								
Secretary								
Cosmetologist								
Fireman								
Auto Mechanic								
Disc jockey								

2232

Form ES-11

INDEPENDENT SCHOOL DISTRICT NO. 1
TULSA COUNTY, OKLAHOMA

FOR INTER-OFFICE AND INTER-SCHOOL CORRESPONDENCE

To Principals and Consultants

From George Wright, Project Coordinator, Exemplary/CVET Programs

Date September 10, 1971

There will be a meeting of all CVET and Exemplary Personnel, Saturday, September 25, 1971, in Room 402, Education Service Center from 8:30 a.m. to 11:30 a.m.

We would very much like for you to meet with us and give us your thoughts on the various aspects of the program.

Stipends will be paid to those able to attend from 100% Special Vocational funds.

Approved: M. J. Ruley
Dr. Bruce Howell

2233

Form ES-11

INDEPENDENT SCHOOL DISTRICT NO. 1
TULSA COUNTY, OKLAHOMA

FOR INTER-OFFICE AND INTER-SCHOOL CORRESPONDENCE

To All CVET and Exemplary Personnel

From George Wright - Project Coordinator, CVET/Exemplary Programs

Date September 10, 1971

There will be a meeting of all CVET and Exemplary Personnel, Saturday, September 24, 1971, in Room 402 (note room change from original bulletin) from 8:30 a.m. to 11:30 a.m.

Stipends of $15.00 per Saturday session will be paid to those attending. We will work on curriculum development and exchange ideas on procedures, funds provided through 100% Special Vocational funds.

We are enclosing CLASS RECORD, Form#1, due in the Vocational Office Sept. 17; SCHEDULE OF CLASSES, Form #2, due in the Vocational Office Sept. 17 and VE 6000 R due Saturday morning, Sept. 25.

Approved: M. J. Ruley
Dr. Bruce Howell

2234

Form ES-11

INDEPENDENT SCHOOL DISTRICT NO. 1

TULSA COUNTY, OKLAHOMA

FOR INTER-OFFICE AND INTER-SCHOOL CORRESPONDENCE

To Junior High School Principals

From Wayne Bland

Date October 13, 1971

RE: Credit for CVET and Exemplary Program

The Annual Bulletin for Elementary and Secondary Schools, 1971, approves the granting of two (2) units of credit in Coordinated Vocational Education in grades 9-12 to each student who successfully completes a CVET or Exemplary Program which meets two hours daily for the entire school year.

Although the bulletin does not give specific information on these programs in grade 8, it will be acceptable to use the same procedure for recording the couse title and amount of credit for all students in the junior high school who complete these programs.

Effort should be made to avoid scheduling students into these programs in lieu of basic courses required for graduation.

Approved:

Dr. Hiram Alexander, Assistant Superintendent for Administration

W. Leroy Tharp, Administrative Director for Secondary Education

cc: Mr. Morris Ruley
Mrs. Frances Smith
Miss Allie Dale Lambert
Mr. Scott Richardson

Lewis Cleveland, Asst. Supeintendent for Pupil Personnel and Special Education Services

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Form ES-11

INDEPENDENT SCHOOL DISTRICT NO. 1
TULSA COUNTY, OKLAHOMA

FOR INTER-OFFICE AND INTER-SCHOOL CORRESPONDENCE

To Principals of Irving, Longfellow and Riverview Elementary Schools

From George D. Wright - Project Coordinator CVET/Exemplary Programs

Date October 29, 1971

This is to confirm our conversation of October 29, relative to Video-taping the Elementary Occupational Exploration Clubs.

The following schools will be taped on the date and time shown below:

Nov. 3 - Longfellow	3:00-4:00 p.m.
Nov. 10 - Riverview	3:00-4:00 p.m.
Nov. 17 - Irving	3:00-4:00 p.m.

2236

LIST OF MEETINGS SCHEDULED FOR ELEMENTARY

November 3	Irving - f/s What Good is School? Riverview - Policeman speaking Longfellow - Fire department - bringing truck and film
November 4	Jefferson - Attorney speaking
November 10	Riverview - Florist (Daryl Browning) showing how to make corsage - telling duties Pershing - trip to Southside Christian Church Lowell - Policeman speaking Irving - f/s What Do You Like to Do?
November 17	Irving - Speaker, KCNW radio - Dick Fain Riverview - Touring KRMG studio Pershing and Johnson together at Pershing to hear Gary Kroll, baseball player Longfellow - Stewardess speaking
November 22	Irving - f/s What is a Job? Longfellow - Student nurse speaker
December 1	Riverview - Luther Roberts, representative from Public Service Irving - f/s What are Job Families? Longfellow - Dental Assistant

2237

Special Vocational Programs
Exemplary and CVET
Tulsa Public Schools
Bulletin #4

PROCEDURE IN SCHEDULING BUSES FOR FIELD TRIPS

ITEMS

1. Field trips will be initiated by the teachers through their school office on RQ-2 with at least two weeks time lapse before buses are scheduled.

2. Students must have signed permission cards, follow procedure in your school.

3. Time allotted for such trips for district-owned buses will be between 9:00 a.m. and 2:00 p.m. Request is written on an RQ 2.

4. There is a budget allocation for student field trips for CVET Projects #2, 5, 8, 11 and the Exemplary program.

5. During the 70-71 year the average time of trip was three hours at a cost of $20.00 per trip.

6. The number of trips allotted for CVET and Exemplary Programs will be in relationship to the monies provided for in the budget for each project.

7. If unable to schedule a district-owned bus, one may be requistioned from the Metropolitan Tulsa Transit Authority, 510 S. Rockford. The cost is $10.00 per hour, with a two-hour minimum, from pick-up point back to their garage. The smallest bus they have carries 45 people. Make an effort to group your classes to cut the number of trips. It will depend on company policies and practices as to the number of students that they will handle. Request should be written on RQ 1 for outside carrier.

THIS WILL BE RE-EVALUATED AT THE END OF THE SEMESTER

SCHOOL BUS TRANSPORTATION (From Policies, Regulations and Procedures for Tulsa Public Schools, 7-1-1970, p 11)

School buses may be used by class groups for field trips where transportation is required and properly authorized. These trips are to be made to a specific place of educational value. Field trips shall be approved only upon written request from the teacher through the principal and with the approval in writing of the Assistant Superintendent for Administrative Services. Final approval to the Transportation Office will be made in writing from the Office of the Assistant

2238

Superintendent for Business Management. This request must be submitted to arrive in the Transportation Office at least two weeks prior to the date of the expected trip. Such field trips during the first month of school each year should be limited so that our regular bus schedules can be properly adjusted.

Approved: Ted W. Coover, Assistant Superintendent
for Business Management

2239

TULSA PUBLIC SCHOOLS

INDUSTRIAL, VOCATIONAL AND TECHNICAL EDUCATION

CVET - EXEMPLARY PROGRAMS

The enrollment form (VE-6000-R) has been designed to provide local, state, and federal decision makers with basic, numerical, management information about all vocational, technical and special programs. One aspect of this study is to determine exactly how many students are being served and to be able to determine if they enter into a regular vocational program from a special program (CVET or Exemplary).

Some items on this form will not apply at the present time to the CVET or Exemplary Programs, such as:

1. Occupational objective
2. The social security number
3. Occupation code

A sample of the VE-6000-R is included showing portions to be omitted.

Complete a form VE-6000-R for each student in your CVET or Exemplary program.

Use Class Code No. 20041

You may have students complete the form as a group under your instruction, or you may complete the forms.

Put in alphabetical order, label from school and teacher and bring to the September 25 meeting.

If there are questions pertaining to the form, contact Mr. Ruley's office, Ext. 318, Education Service Center.

M. J. Ruley, Director
Homer B. Towns - Assistant Director
George D. Wright - Local Project Coordinator
Allie Dale Lambert - Supervisor
Frances W. Smith - Supervisor

2240

SAMPLE

ENROLLMENT FORM Department of Vocational and Technical Education

Student's Signature John R. Doe Occupational Objective OMIT

	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	FIRST INITIAL	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	MIDDLE INITIAL	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	L	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	A	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	S	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	T	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
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	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O		P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	N	P	Q	R	S	T
	U	V	W	X	Y		Z				
	A	B	C	D	E		F	G	H	I	J
	K	L	M	N	O	A	P	Q	R	S	T
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	A	B	C	D	E		F	G	H	I	J
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	U	V	W	X	Y		Z				

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1	0	1	2	3	4		5	6	7	8	9
7	0	1	2	3	4		5	6	7	8	9
2	0	1	2	3	4		5	6	7	8	9
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FOR TEACHER USE ONLY

A	1	2	3	4	5	
B	NO	YES				
C	NO	1	2	3	4	
D	NO	1	2	3	4	5
E	NO	1	2	3	4	

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SOCIAL SECURITY NUMBER

VE-6000-R

2241

ENROLLMENT FORM Department of Vocational and Technical Education

Student's Signature _____ Occupational Objective _____

A K U	B L V	C M W	D N X	E O Y	FIRST INITIAL	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	MIDDLE INITIAL	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	L	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	A	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	S	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	T	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y		F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y		F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	N	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	A	F P Z	G Q	H R	I S	J T
A K U	B L V	C M W	D N X	E O Y	M	F P Z	G Q	H R	I S	J T
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0 1 2 3 4					SOCIAL SECURITY NUMBER	5 6 7 8 9				

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0 1 2 3 4						5 6 7 8 9				
0 1 2 3 4						5 6 7 8 9				

FOR TEACHER USE ONLY

A	1	2	3	4	5
B	NO	YES			
C	NO	1	2	3	4
D	NO	1	2	3	4
E	NO	1	2	3	4

VE-6000-R

2242

Special Vocational Education
Tulsa Public Schools
Exemplary Program
Bulletin #7

FIELD TRIPS

WHERE DO YOUR STUDENTS WANT TO GO ON FIELD TRIPS? LIST ANY SUGGESTIONS BELOW PLEASE. IF YOU KNOW APPROXIMATELY WHEN YOU WANT TO GO, PLEASE PUT THE DATE TOO.

PLACE	SCHOOL	DATE

SUGGESTIONS

Radio station KCNW is willing to have elementary students tour.
American Airlines MAY have tours available after January 1st.
The telephone company is working up a new program - ready Jan. 1.
Zebco will accept touring groups
I think I know a dentist that will permit small groups to visit.
Acme Brick Co.
Frankhoma Pottery
KOTV Television
Jan Lester - Brookside Beauty College
Oklahoma Employment Agency - simulated interviews
Midwest Chevrolet

2243

Some schools have begun taking field trips and having speakers from different occupations at the club meetings. In order to obtain speakers for you and arrange field trips, I will need a tentative schedule with approximate dates that you want speakers to represent specific occupations and the places you'd like to visit on field trips.

2244

Suggested Form Letter for Thank You for the Field Trip

School Letterhead
Tulsa, Okla. zip
Date

Name of Contact
Place Visited
Street Address
Tulsa, Okla. zip

Dear _____:

The _____class from _____ enjoyed the tour of _____so very much. We wish to thank you for making this interesting as well as educational tour available to us. We appreciate your interest in the future of young people and in helping them find a vocation to fit their needs.

The students were surprised at the various types of employment available to them in _____work. Thanks to you we had a very rewarding experience.

Yours truly,

_____Your name_____

_____Position_____

2245

SUMMARY OF ACTIVITIES

Central High School - Eugene Williams

Positive Reactions to the Project:
1. Students seem to be interested in class
2. All take an active part

Major Activities or Occupational areas:
Drawing set of House Plans
1. Floor plan
2. Front and Side elevations
3. Wall section
4. Laying shingles on roof

Major Units or occupations discussed and explored
1. House plans and drafting tools
2. Hand tools - name, use, safety
3. Power tools - name, use, safety

Future Activities planned:
1. Building complete one-room house in shop
2. Guest speaker - man owns his company will talk about being on time, doing good work, will combine groups with Mrs. Lusty.

Central High School - Iwannah Lusty

Positive Reactions to the Project:
1. Students are deeply involved in learning salable skills.
2. Contact with Project 12 and AMIDS on project has been most favorable
3. Mr. Leo Cowan, Borden's Cafeterias, is very interested in project and has promised to aid me with second-year students if class can be worked out.
4. Dr. Katherine Howell, O.S.U., is helping me plan a prospectus for a second-year class.
5. One student transferred from Edison to Central to take the class.

Major Activities or Occupational areas:
1. Sewing Services - patch-work pillows, macreme' belts, crocheted rings,
2. Grooming - Personal Development - Field trip to Merle Norman for facials, demonstration of straightening black's hair, modeling by Mary Lou Dotson, Sear's Fashion Co-Ordinator.

Major Units discussed and explored:
Sewing Services
Time Clock
Social Security
School Record
Use and care of electric range

List results and/or Hands on experience:

2246

List results and/or Hands-on experience:
Girls are making Macreme' belts and selling them
Crocheting rings has created interest in learning to do other crochet.
Dissemination Activities:
Co-Ed Magazine has articles every month on Know Yourself - The girls read them and we discuss and work out problems that are presented.
Other Activities:
Mr. Burnett, Royal Typewriter Co., loaned us a Time Clock for one week and the girls clocked in and out. I figured out their time and paid them on paper for the time they spent "working".
Staff Utilization:
Mr. Browning has been most helpful
Mr. Duncan (I.E. Bldg.) has made some boards for my girls to Decoupage.
Future Activities:
Sale of popcorn balls and caramel apples to figure profit and loss in running a small business in Food Service area.
Field trips to Sky Chef and Bryan's Infant Wear
Vocational Test by Department of Defense, November 19.

Horace Mann Junior High - Patsy Carson

Major Activities or Occupational Areas
1. Learning to operate a sewing machine

Result and/or Hands-on experience
1. Made skirts and blouses
2. Learned to use scissors properly
3. How to operate an electric sewing machine

Future Activities Planned
1. Start laundry unit
2. Field trip to Oklahoma Natural Gas for a laundry demonstration

Suggestions for improvement
1. More students

Horace Mann Junior High - Joe Eastham

Positive Reactions to the Project:
1. Gives the student an advantage to succeed in a chosen vocation
2. Helps student to select or think about a vocation from hands-on experiences.

Major Activities or Occupational Areas:
1. Construction
   a. Carpentry - Building model houses
   b. Masonry - Building cement blocks and stepping stones

Major Units or Occupations discussed and explored:
1. Construction
   a. Carpentry
   b. Masonry

Future Activities planned:
1. Field trips
2. Small engine repair
3. Construction of dog house

Roosevelt Junior High - Frankie Roemer

Major Activities or Occupational Areas explored
1. Food Services (Learning to be a Bus Girl and Waitress)
2. Safety
3. Applying for a Job
4. Know Yourself
5. Importance of School records
6. Social Security
7. Personality Development
8. Work permits
9. Grooming

List results and/or Hands-on experience
1. We secured social security cards
2. Attempted to secure work permits
3. Girls are improving appearance, they groom one day each week.

Dissemination and other Activities
1. Made rings out of telephone wire; sold them for 20¢ each.
2. Did bulletin board for Main Office.
3. Had 65 visitors from Irving and Pershing Elementary Schools
4. Had a Forum at beginning of school to explain program to all students.

Future Activities planned:
1. Field trip to Oklahoma Natural Gas Co.
2. Mrs. Meleese Forth (special guest)

Suggestions for improvement
1. More money for field trips

Roosevelt Junior High - James Gray

Positive Reactions to the Project
1. Principal is working with our program and is very interested in it.
2. Counselor is helping by placing students in my classes.

Major Activities or Occupational areas:

Service Occupations
1. Trim sidewalks
2. Mowing the school ground
3. Cultivate around trees, hedges, and shrubs

General Construction Trades
1. Concrete Form Building
2. Cement Work

Guidance
1. Know yourself
2. School records
3. Social Security Cards
4. Employment Offices

2248

Major Units or Occupations discussed and explored

1. Service Occupations
2. General Construction Trades
3. Guidance
4. Construction
5. Small Engines

Other Activities:

Students are mowing, trimming and working in the flower beds at our school. Also, these students are building park benches for the outside school ground and they are also working on similar benches for the halls.

Irving Elementary - Karen Tyner

Positive Reactions to the Project

1. We have lost no members and have gained new members each week.
2. Students report on activities to homeroom class.
3. Homeroom teachers report students are interested and excited.
4. So far the things learned have been retained.
5. Other teachers are beginning to become involved.

Major Activities or Occupational areas and accomplishments

1. Field trips to W.C. Norris Co.; Unit Rig Co.
2. Policeman spoke to group.
3. Saw and discussed filmstrip "Who Are You?
4. Members interviewed workers as to skills needed and duties performed.

Major Units discussed and explored

1. Have completed Unit I - <u>The World of Work</u>

Results and/or Hands-on experience

1. Officer Rossen of Tulsa Police Department gave an excellent talk and then answered questions. Members were impressed with him. They asked questions about duties, pay, retirement, laws, and even what he did for leisure. After the meeting the members fully examined the Police car.
2. In the field trip to W. C. Norris, the students saw numerous occupations from custodian to foreman and inspector. They found that a high school education was necessary for employment and that many make up to $10,000 annually.
3. The members seem to already have an idea of the limitations involved in dropping out of school.

Dissemination activities: bulletins sent to parents. Discussed program in faculty meeting.

Other Activities: We have discussed the relationships of hobbies enjoyed now to jobs in the future.

Staff Utilization: The sixth grade homeroom teacher allows students to report on meetings to class. She also gives them time in language class to write letters of thanks.

Future Activities Planned:
1. Field trip to Roosevelt
2. Trash hauler will speak
3. KCNW radio station manager will speak
4. Tentative field trip to KCNW

Jefferson Elementary - Garry Nichols

Positive Reactions to the Project:
1. Interest
2. High attendance
3. Great enthusiasm

Major Activities or Occupational areas:
1. Getting to know the terms of work
2. Which jobs we are interested in
3. How to run our meetings

Other Activities:
1. Learning to decoupage; getting supplies, making, figuring cost, selling process.

Future Activities planned:
1. Field trips
2. Speakers
3. Project work
4. Discuss job clusters

Lincoln Elementary - Sara Abel and Helen Bailey

Positive Reactions to the Project:
1. Good attendance and enrollment
2. Students appear enthusiastic

Major Activities or Occupational Areas
1. Filmstrips and interviews showing the relatedness of education to the world of work.

Major Units or Occupations discussed and explored:
1. Medical
2. Construction
3. Business

Results and/or Hands-on experience:
1. Craft consisting of occupational-type puppets.
2. Interviews

Staff Utilization:
1. Display of student activities
2. Information to staff regarding program

Future Activities planned:
1. Speakers
2. Field trip
3. To follow and expand on curriculum developed.

Lowell Elementary - Steve Wigginton

Positive Reactions to the Project:
1. Students enjoying the club.

Major Activities or Occupational Areas:
1. Elected officers for the club.

2250

Major Units or Occupations discussed and explored:
1. None so far, have had only two meetings.

Other Activities:
1. Played pantomine game "What's My Line"

Staff Utilization:
1. Mrs. Price, a social worker for the school, is helping with our club.

Future Activities planned:
1. Disc Jockey from radio station KCNW. He will discuss jobs in radio industry.

Pershing Elementary - Eunice Copeland

Positive Reactions to the Project:
1. Children have benefitted in that they have begun to think about what kind of jobs they might be interested in; how much training the job would require, the rewards of honest work and how they might help finance the training needed.

Major Activities or Occupational areas:
1. Forming rules and electing officers.
2. Equating the importance of school to one's future profession.
3. Listing five occupations they want to know more about.
4. Interviewing two persons about what they do at their job and what school subjects helped them in their profession.

Major Units or Occupations discussed and explored:
1. A talk by Police Officer Rosson
2. A visit to a church where a minister talked of social services.

Results and/or Hands-on experience:
1. School is important and does relate in a meaningful way to one's future.
2. Now is the time to begin planning for what job you are now interested in.
3. How to obtain that job.

Dissemination Activities:
1. Called parents whose students are in WOW to tell them about the program.
2. Talked with parents during Back-to-School night. Room was open so parents could browse, bulletin board was fixed showing coming attractions for WOW participants.

Future Activities planned:
1. Visit from representative of Voc-Tech Training Center
2. A possible visit to Central High
3. A visit from a representative of Tulsa Junior College
4. A possible visit to a clothing factory

2251

Riverview Elementary - Helen White

Positive Reactions to the Project:

1. Very good response from the boys and girls.

Major Activities or Occupational Areas:

1. Visited the Tulsa Public Library after school on October 6.
2. Had a barber come and give a haircut on October 11.

Major Units or Occupations discussed and explored:

1. Interested in radio and T.V.
2. Airlines (Stewardess)
3. Medical vocations, such as nursing, dentists, etc.

Staff Utilization:

1. Very cooperative - The clerk, principal and teachers are very helpful in suggestions.

Future Activities planned:

1. A tour of Public Service plant across river.
2. A Policeman is to come November 3.

Junior High Vocational Counselor - Dewey Martin

Positive Reactions to the Project:

The overall picture of the program in the two Junior High Schools seem to be improving since school has started. The students now are feeling the need and advantage of the classes. The reactions among them (the students) are very good.

Major Activities or Occupational areas and Accomplishments during this period:

The Homemaking areas have covered:

1. Child Care
2. Sewing
3. Meal preparation
4. Personal Grooming
5. Proper Manners.

The Industrial Arts areas have covered:

1. Construction of houses
2. Concrete work
3. Drafting and blue print reading
4. Lawn care

The Business Education area has covered:

1. 10-Key Adding Machine
2. Shorthand
3. Bookkeeping
4. Typing
5. Cash register

Major Units or Occupations discussed and explored

1. Concrete Masonry
2. Blue Printing
3. Construction
4. Assembly-line sewing
5. Cooking
6. Cafeteria food handling
7. Bookkeeping
8. Typing

Significant findings and events: List Results and/or Hands-On Experience

Students that didn't seem to find interest in school find themselves wanting to attend class and take great interest in the subjects covered in World of Work classes.

Other Activities:

1. Field trip to Bryan's Infant Wear
2. Field trip to Oklahoma Natural Gas Co.

Future Activities Planned:

1. Field trips planned to Zebco, Oklahoma Natural Gas Co., American Airlines and Maintenance.
2. Outside speakers in various fields.

2253

Elementary Coordinator/Counselor - LaVonne Hunter

Positive Reactions to the Project:

The enthusiasm of the teacher-sponsors and principals has begun to show rewards. The faculty members of some of the schools are becoming involved in the "World of Work" program.

The students are showing an interest in the clubs. They are expressing interests in particular occupations.

The club sponsors are showing initiative. Many have suggested activities to be tried and occupations to be explored.

Many of the community businesses that have thus far been contacted have shown an interest and a desire to cooperate and aid the program in whatever way they can.

Southwestern Bell Telephone Company is working up a new program to bring into the schools. The program should be ready by January.

Oklahoma Natural Gas Company is doing the preparatory ground work necessary to have speakers go to the different schools and discuss their respective jobs, and discuss their respective jobs, and also to make field trips available to the students so that they may see people actually doing their respective jobs. Four hundred occupations are represented in the company.

The radio station, KCNW has agreed to have speakers talk to the children during their scheduled club meetings and also to schedule tours of the station.

The Police department has sent a policeman dressed in full uniform attire to several schools. The students have been allowed to examine the police car. The policeman spoke about his training and the duties of the job.

The Tulsa City Library hosted a tour of its facilities and explained to the students about the different occupations in a library.

The Norris-O'Bannon Division - Dover Corporation (W.C. Norris) hosted a tour of its plant on North Elwood and had the workers explain to the club members about the work they were doing and the training necessary.

Crane Carrier Company - Division of CCI Corp. (Unit Rig) allowed students to tour plant.

Major Activities or Occupational areas and Accomplishments during this period:

The students are becoming aware of many occupations that are available through discussion, browsing through the W.O.R.K. Kit and other materials, and speakers from different occupations.

Irving School toured the W. C. Norris Plant September 22, 1971.
Irving School toured Crane Carriers (Unit Rig) October 13, 1971.
Riverview School toured the City Library October 6, 1971.
Johnson School is making a quilt and building a brick wall. These students should learn about the necessity of team work and the planning necessary to complete a job.
Jefferson School saw a demonstration on decoupaging. The students plan to decoupage and either sell their products to finance other club activities or use the results as Christmas gifts.
Irving, Pershing, and Lincoln Schools have had a policeman talk to the students about the work of a policeman - the qualifications, training, etc.
Riverview students observed a barber cutting hair. He allowed the students to handle the tools he used and they learned the names of the tools.

Major Units or Occupations discussed and explored:

All eight of the schools involved in the Exemplary program have been using Unit I (Orientation and Introduction to the World of Work Club) in their club meetings.

After completion of Unit I for the World of Work Club, the student should be able to list three rules needed for becoming a club member in good standing and should be able to discuss the purpose and define the organizational procedure needed for their club meeting. He should be able to define parliamentary procedure needed for their club meeting, elect officers and conduct a club meeting. He should be able to discuss ways that school is related to the World of Work and to make a list of five occupations.

Significant Findings and Events: List results and/or Hands-on experience:

Students have learned detailed information about training and duties of a policeman, a disc jockey and a barber. The students have seen the necessity for cooperation between workers in plants visited. Club members are aware that basic skills of reading, writing and arithmetic are required in nearly every job.

Problems/Needs:

We need to be able to take field trips during the school day and have more correlation between regular school work and the World of Work Club.

School bus transportation is not available between 3:00 p.m. and 4:00 p.m. when the clubs have their meetings.

Dissemination Activities:

At the Tulsa State Fair the Exemplary Program was represented in a booth.

Some of the local businesses are now aware of the goals and the aims of the program and are participating in the program.

Other Activities:

Filmstrips, posters, films and games have been used to acquaint students with different occupations available.

Staff Utilization:

Melisse Forth, employee of CVET program spoke to Jefferson School on how to decoupage October 7, 1971.

The teachers of involved schools have given suggestions for resource people and correlated homeroom activities with World of Work club activities when possible. Some schools have used the language period to write thank you notes to companies visited and speakers who have been to club meetings.

Future Activities Planned:

Some of the elementary schools plan to visit junior and senior high schools involved in the Exemplary program.

The following speakers will go to the respective clubs according to the interest of the club members:

1. Florist
2. Oklahoma Natural Gas Company employees (400 occupations represented)
3. Cement mason
4. Construction worker
5. Secretary
6. Clergyman
7. Attorney
8. Telephone Company employees
9. Television and radio repairmen
10. Beautician
11. Cook
12. Salesman
13. Dentist
14. Trash hauler
15. Nurse
16. Employment counselor
17. Electrician

Projected and hoped for field trips are:

1. Oklahoma Natural Gas Company
2. Beauty College
3. Barber College
4. Airport
5. Television stations
6. Radio stations
7. Bank

8. Frankhoma Pottery
9. Fire stations
10. Merle Norman studio

Suggestions for Overall Improvement:

If the teacher-sponsors could make a long range tentative plan of speakers and field trips desired with approximate dates it would be easier to help them acquire speakers and arrange for field trips.

2257

EXEMPLARY VOCATIONAL EDUCATION FIELD TRIPS

Date	Destination	Approx. No.
Sept. 23, 1971	Roosevelt Jr. High to Bryan Infant Wear and return	
Oct. 13, 1971	Central High School to Bryan Infant Wear and return	
Oct. 14, 1971	Central High School to Bryan Infant Wear and return	28
Oct. 14, 1971	Central High School to Bryan Infant Wear and return	11
Oct. 20, 1971	Irving and Pershing Elementary to Roosevelt Jr. High and return	
Oct. 26, 1971	Horace Mann Jr. High to Bryan Infant Wear and return	13
Nov. 11, 1971	Roosevelt and Horace Mann to Oklahoma Natural Gas Co. and return	
Nov. 18, 1971	Jefferson and Longfellow Elementary to the Court House, Library and Post Office and return	
Nov. 18, 1971	Horace Mann Jr. High to American Airlines and return	14
Nov. 18, 1971	Lincoln Elementary to Southwestern Bell Telephone Co. and return.	

2258

IRVING WORLD OF WORK CLUB -- Karen Tyner

Field trip to Norris--O'Bannon, 10 N. Elwood, September 22, 1971

Benefits to students:

1. Students saw workers on the job. Each person had responsibilities and did his job.
2. Students were told that requirement was high school education. Firm supplies on-the-job training.
3. Students found that laborers made a good living. Pay is $2.88 - $3.49 per hour. With overtime, many make $10,000 yearly.
4. Students saw how each person's work fit together to complete the job. Each person must do a good job.

Points of interest:

1. Computer-operated machine.
2. "Shaker" machine to smooth rough edges from parts.
3. Metal shaves are sold to be melted and re-used.
4. Water-cooled drilling machines.
5. At one machine saw -- the operator, the die fitter, and the inspector which showed a variety of jobs in one firm.
6. Many relatives work there including one family with three generations presently employed.
7. Saw parts of machine in all stages of production, from raw to painted and packed.

Field trip to Tulsa Unit Rig October 13, 1971

Benefits to students:

1. Saw more types of occupations as they were being done.
2. Students were able to talk to workers and ask questions.
3. Several students stated that the occupations seemed quite interesting. The boys were very interested in welding and mechanics.

Points of interest:

1. Saw men in many stages of production of equipment.
2. Saw a truck over a pit allowing students to go under it. They saw all the parts, then went inside the cab.
3. Saw a cement mixing truck. The workers operated it for the students.

This trip was of much more interest and of more benefit to the boys. Several of the girls had little interest.

2259

Speaker: Floyd Rossen, Tulsa policeman September 29, 1971

Highlights of talk:

1. Division of police department
2. Must be high school graduate and 21 years of age
3. 12 week training school plus 2-5 days of school each year
4. Starting salary, $542 monthly
5. Discussed other occupations with force (matron, secretaries, etc.)
6. Equipment used
7. Services other than law enforcement
8. Retirement plan
9. Must be able to get along with people
10. Were allowed to fully explore police car.

Benefits to students:

1. Found excellent rapport with policeman
2. Once again saw need for high school education
3. Learned the variety of duties and different occupations within police force.
4. Saw the need for the ability to get along with others
5. Saw a policeman as a human being

Irving School, Room 1
18 North Maybelle
Tulsa, Oklahoma 74127
November 4, 1971

Bill McKim, Deputy Fire Marshall
Tulsa Central Fire Station
Engine One
411 South Frankfort
Tulsa, Oklahoma 74102

Dear Mr. McKim:

Thank you for an excellent presentation made to the Longfellow World of Work Club November 3. The students were delighted with your presentation, the film, and the fire truck. The video taping was successful and we are most grateful to you for your willingness to lend your time and talent to help the students.

Please give a special word of thanks to the following men:

Captain Ramey
Mike Malone
George Moore, the driver
Ray Enlow for demonstrating the clothing
Bobby Goddard for demonstrating the fresh air mask

The club meeting yesterday will surely be remembered by the children for many years to come.

Thank you for your interest in the future of our young people.

Sincerely,

LaVonne Hunter
Elementary Counselor/Coordinator
Exemplary Vocational Program
Tulsa Public Schools

2261

Irving School, Room 21
18 North Maybelle
Tulsa, Oklahoma 74127
November 5, 1971

Mrs. E. Robert Reed, Jr.
8526 East 31st Street
Tulsa, Oklahoma

Dear Mrs. Reed:

Thank you for agreeing to speak to the Riverview School World of Work Club November 10 from 3:00 p.m. to 4:00 p.m. We appreciate your willingness to have your presentation video-taped.

The purpose of the Exemplary Vocational Program on the elementary level is to develop a respect for all work and motivate all youth to want to participate in the world of work. We want the children involved in this program to gain an awareness of the wide range of occupational opportunities available to them, a realization of how education helps to prepare them for jobs and careers, and a feeling of respect for opportunities to earn a living.

During the first few minutes of your presentation we would like for you to stress the following:

1. The training and education required to become a florist.
2. Describe the typical day of a florist. Tell about the job duties.
3. Tell about the materials you work with.
4. Tell what special skills or talents are needed.
5. The working hours of a florist
6. Anticipated salary
7. The interests that might lead a person into a career as a florist
8. The training available in Tulsa for a person interested in becoming a florist

We would like a question and answer period where you interact with the students.

After this has been presented we would like to see an actual demonstration as we discussed in our telephone conversation.

Should you have any questions about the program or the presentation please call me at 582-4188.

Thank you very much for volunteering your time and talent to help our young people.

Sincerely,

LaVonne Hunter

2262

Irving School, Room 21
18 North Maybelle
Tulsa, Oklahoma 74127
November 5, 1971

Mr. Dick Fain
KCNW
2805 East Skelly Drive
Tulsa, Oklahoma

Dear Mr. Fain:

The feedback I received from Lowell School on the presentation you made for the World of Work Club, October 20 was most impressive. I am truly sorry that I was unable to attend the club meeting. From all reports I received you stressed all the things we had discussed over the telephone and the children really enjoyed having you.

Thank you for agreeing to speak to the Irving World of Work Club November 17 from 3:00 p.m. to 4:00 p.m. We all appreciate your willingness to have your presentation video-taped.

Most of the material that I will mention in this letter we have discussed over the telephone, but I thought you would like some extra material for reference.

The purpose of the Exemplary Vocational Program is to develop a respect for all work and motivate all youth to want to participate in the world of work. We want the children involved in this program to gain an awareness of the wide range of occupational opportunities available to them, a realization of how education helps to prepare them for jobs and careers, and a feeling of respect for opportunities to earn a living.

During the first few minutes of your presentation we would like for you to stress the following:

1. The training and education required to become a disc jockey
2. The interests that lead a person into the radio business
3. A description of a typical day of a disc jockey--working hours, job duties performed, materials or equipment used, interaction with personnel
4. The training available in Tulsa - if any
5. The opportunities afforded for promotion
6. The different types of occupations needed in a radio station and briefly the skills, talents, education and training needed for them.

2263

We would like a question and answer period where you interact with the students at the conclusion of your presentation.

Should you have questions about the program or the presentation, please call me at 582-4188.

Thank you so very much for volunteering your time and talent to help our young people.

Best regards,

LaVonne Hunter
Elementary Counselor/
Coordinator
Exemplary Vocational Program
Tulsa Public Schools

2264

TO: World of Work Sponsors

FROM: LaVonne Hunter

DATE: November 8, 1971

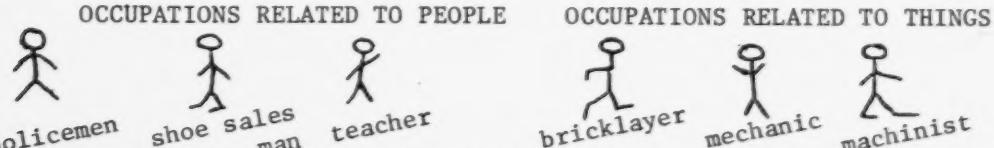
I would like to talk to each of you personally to pass on suggestions and get your suggestions, but I know how busy your schedules are and I hate to interrupt you during the teaching day. Hopefully, this memo will serve the same purpose.

Johnson School has been paper hanging and painting a room at the school. Don McGowan thought some of the other schools might like to visit it when they finish and see the work. Anyone interested?

In our meeting about the pre-test it was suggested that the students draw pictures of people in different occupations relating first to people; then to things. The children could put up a bulletin board for each category and label their own pictures.

EXAMPLE:

OCCUPATIONS RELATED TO PEOPLE OCCUPATIONS RELATED TO THINGS



Some sponsors want tempera and brushes for the students to use in club meetings. Others prefer colored magic markers to save time and mess. What do you want?

There is an excellent manual on field trips available! Let me know if you want to see it. I hope to get a personal copy for each of you later.

Below are some suggestions to discuss BEFORE a field trip:

Have children notice workers and ask themselves these questions:

1. If I wanted to do that job, would I have what it takes?
2. Would that job meet my needs?
3. Would I ENJOY doing it?
4. Of all the jobs I saw today what job could I do best?
5. What job could I do least well?

Thanks to those of you who have turned in your club enrollment forms. There is no need to fill in the columns - IQ and Reading Level. Please send me the forms at your earliest convenience.

Have all of you sent thank you notes to speakers who have talked to your club and places you've visited on field trips? Perhaps that would be one of the club secretary's duties. Some schools have correlated World of Work with some English homeroom activities and written thank you notes in class.

2265

If possible could you give me a general, brief review of speakers who visit the club and a brief report of field trips taken? These could be shared with the other club sponsors.

Drop me a note if you can on scheduled events - speakers, filmstrips and field trips - as far in advance as you know them.

If you have had any especially favorable speakers or have taken any field trips you think others would enjoy, let me know. I'll pass on the good word!

Have you ordered construction paper yet?

Longfellow Club had a fireman November 3. He was video-taped. Riverview has a florist coming November 10 and Irving has a disc jockey coming November 17. They will also be video-taped.

I sent a key to the Pre-Test in the school mail. Would you please forward the graded tests to me in the school mail when they are finished? I know some of you had previous speakers engaged and trips planned so you haven't had time to give the tests.

The club meetings I have attended have been most interesting! Your cooperation in all matters has been GREATLY appreciated. Your hard work and enthusiasm appear to be paying off. Keep up the good work!

If it is easier for you to give me the information by telephone rather than written form, the school phone is 582-4188.

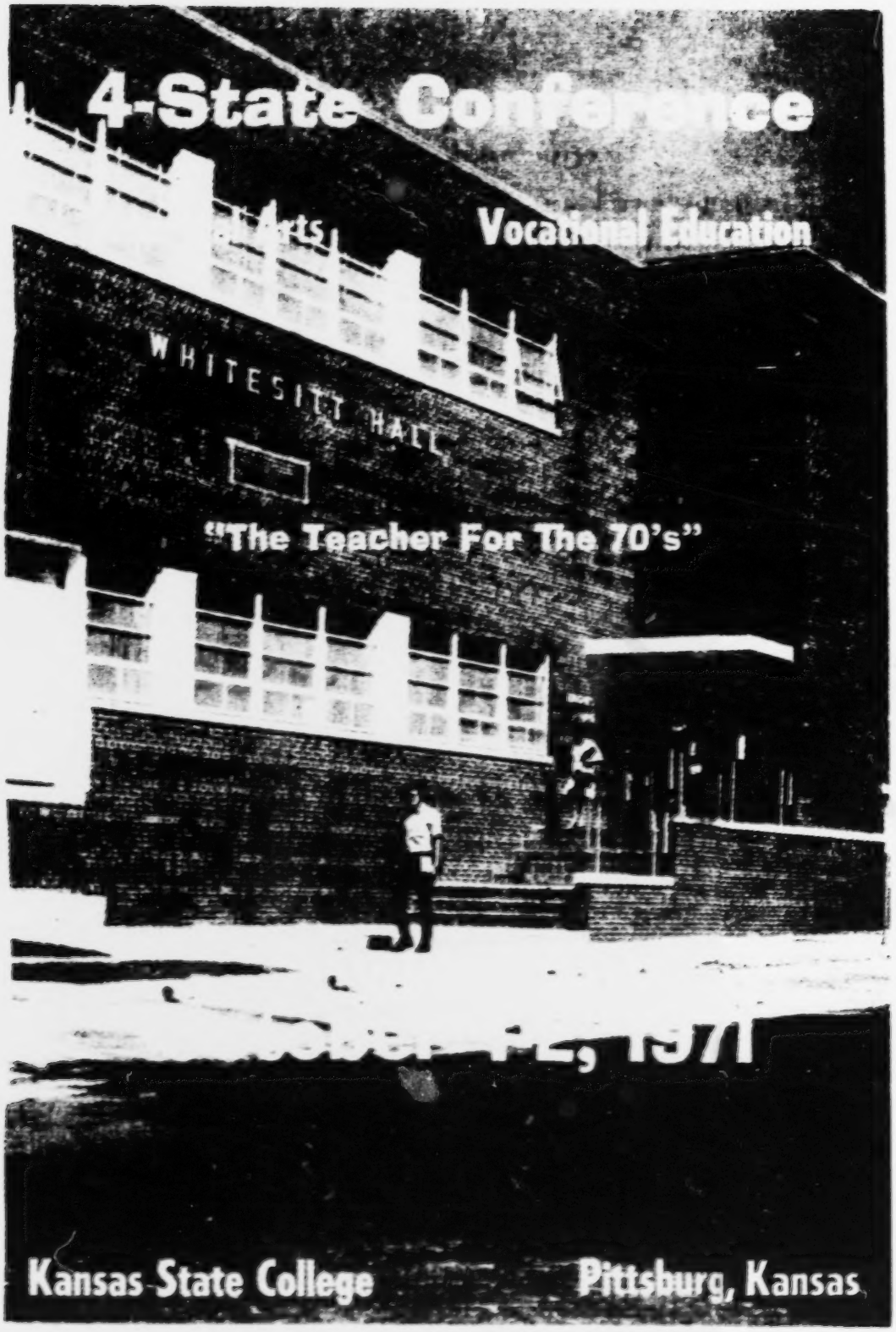
2266

DISSEMINATION ACTIVITIES:

Video-tape on Exemplary program presented to:

1. Denver, Colo. - Home Economics Convention
2. Four-State Industrial Arts and Vocational Education Conference, Pittsburg, Kansas
3. Oklahoma Vocational Education Staff
4. Tulsa Vocational Education Staff

2267


4-State Conference
Vocational Education
WHITESITT HALL
"The Teacher For The 70's"
Kansas State College
Pittsburg, Kansas

2268

Trade and Industry Sectional Meeting
(Room 309 Hughes Hall)

Chairman:

Dr. Maurice Goff, Director, Division of Vocational and Continuing Education, Wichita, Kansas

Speaker:

Alfred N. Weisman, Director of Pupil Personnel Vocational - Technical Education, Special School District, Rock Hill, Missouri

Topic:

Teacher Responsibility for Placement and Follow-up

Speakers:

John Gnagi, Clayton High School, Clayton, Missouri

Topic:

Contract Learning Units

Technical Education Sectional Meeting
(Imperial Ballroom, Student Center)

Chairman:

Fred J. Smith, Associate Professor, Trade and Technical Education, Kansas State College of Pittsburg.

Topic:

A panel discussion of curriculum needs by Graduates of Technical Graduates.

Exhibits Open 3:30 - 5:00 p.m.
Gibson Hall Serving Hours 5:00 - 6:30 p.m.
KIEA BOARD OF DIRECTOR MEETING
Student Center, Twilight Lounge, 5:00 - 6:30 p.m.

Evening General Session
Carney Hall Auditorium, 7:15 - 8:20 P.M.

Chairman:

Homer B. Towns, Assistant Director Industrial Arts, Vocational and Technical Education, Tulsa Public Schools

Topic:

"Motivating Career Development Through the Practical Arts"

Presenters:

Tulsa Public School Staff

SOCIAL HOUR
Student Center—Heritage Room
8:30-9:30 p.m.

2269

School Opens Monday For 75,750 Students

By GREG BROADD
Of the World Staff

Tulsa Public School officials estimate 75,750 students will return to classrooms here Monday, along with 3,084 teachers.

Although the student count will not be official until the end of the first and second weeks of school, the total estimate will be very close, officials agree.

For the most part, Tulsa Public Schools students will enter a year of important and innovative changes.

There are well-publicized changes of desegregated junior high schools, the closing of Carver and Lowell Junior Highs, the voluntary white enrollment to integrate Burroughs Elementary School, and the tightened budget and freeze on teacher pay hikes.

PERHAPS MORE important are changes that will affect the great majority of students and parents.

These revolve mainly around curriculum improvements,

Related Photo on A-1

better teacher preparation, the open school continuous progress program, some new schools, and important challenge programs to make higher-achievers out of students.

To the vast majority of parents, the important items this year are not buses, desegregation, or even tight budgets. They are concerned with quality education.

Among the most dramatic new programs to achieve this goal will be two continuous-progress, open elementary schools—Columbus and Sandburg.

THE SCHOOLS are designed to provide students with an atmosphere conducive to open learning and flexibility of instruction. They are staffed with teachers who have been working all summer at curriculum preparation for this new concept for Tulsa which has only been tried last year in part at Bunche Elementary School and was immensely successful.

The Metro Learning Center at Washington High School is another new first for Tulsa students. It will open with about 50 students and a living-city curriculum aimed squarely at giving high school juniors and seniors — both white and black — an in-depth look at their culture and where they fit into the life style of their generation.

The MLC will bring society and the student together with interpersonal relationships, learning situations, and careful looks at business, government, social institutions, and professions, and the arts.

ALSO NEW this year is the Early Childhood Education Development Center at Lowell Elementary School. This program for 4-year-olds is considered by Dr. Gordon Cawelti, Tulsa schools superintendent, to be one of the most crucial at beginning the educational process.

"We must increasingly be aware of starting education earlier and perhaps cutting it off earlier at the other end. Students come to us knowing more about their world than in the past. And they are expecting to learn a lot more a lot quicker than in the past.

"We are also expecting them to grow up faster and come to grips with more issues at earlier ages than in the past. So the emphasis on working with 4-year-olds . . . is very critical to the whole educational process."

2270

Continued from B-1

EIGHT OTHER new programs are being placed in front of students this year in Tulsa Public Schools. They are:

1. Reading reinforcement of communication skills, new this year at Gilcrease and Roosevelt Junior High Schools and last year at Anderson Junior High.

2. Computer laboratory at the vocational-technical center, which is available to all high school students, with a 1620 IBM system including all components necessary for practical experience in a field with growing demand.

3. Basic mathematics reinforcement, also at the vocational-technical center, which has been termed a "second-chance" plan to give underachievers in math a continuous progress program.

4. MODIFYING the school environment, which is being put into use at Edison High School, will focus on improvement of dialogue, cooperation, and significant learning activities between students and faculty.

5. Block scheduling goes into effect for sophomores at Will Rogers High School and provides more stability and continuity between student and teacher in utilizing time to its best advantage.

6. Computerized modular scheduling is being initiated at East Central High School. It is a program designed to promote the use of the computer in a master scheduling for the entire school and ending up with more flexible schedules for students, greater learning options, and more team teaching and joint teacher planning.

See School on B-3

7. MODULAR English program goes into effect this year at both Hale and Central High Schools, aimed at making the English program more flexible, with greater options.

8. Elementary modular scheduling, similar to what is being done at Rogers and East Central, goes into effect this year at Disney Elementary School to see if it can achieve with younger students the same kind of important flexibility and interaction with teachers as it is hoped to do at senior levels.

Although it isn't new this year, the humanities project at Lewis and Clark Junior High School, which was on the seventh grade level last year, has been expanded to the eighth and ninth grades on a pilot basis. It incorporates art, music, drama, and literature to achieve a total humanities appreciation and knowledge.

THE EXEMPLARY occupational orientation program, which is designed to expose students to the world of work, gives students at Central, Jefferson, Johnson, Roosevelt, Horace Mann, Irving, Lincoln, Longfellow, Pershing, and Riverview opportunities to start learning about management and technical experiences.

An advisor-advisee secondary counseling program developed at Horace Mann brings closer liaison between parents, teachers, and students.

A programmed independent enrichment center to more closely integrate the library with academic programs in elementary schools was begun at Grissom Elementary School last year and this year has been diffused to many other elementary schools.

In relation to other computer programs, a computer-assisted mathematics program continues at Anderson, Dunbar, Washington, Woods, and Johnson.

IN RELATION to new curriculum programs at Bunche, Lewis and Clark, Columbus, and Sandburg, these schools are also getting a program which focuses on maximizing teacher effectiveness in teaming and relying on particular teacher strengths in instruction.

In five schools, Hamilton (social studies), Skelly (English), Roosevelt (social studies), Wilson (science), and Bell (math) last year, a program of learning was designed to permit students to progress as rapidly as they could through task-oriented activites making them more self-reliant.

The program was so successful in those five schools, it has been increased this year to Foster (social studies, math, and science), Lewis and Clark (science), Clinton (science), reading); Cleveland (science), and science at Skelly, where it already was involved with English.

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Special Vocational Education
Career Development
Tulsa Public Schools
Exemplary - Form #2

EVALUATION OF PROGRAM

FROM (check one)

☐ PRINCIPAL _____ SCHOOL _____

Period Covered: From _____ To _____

☐ TEACHER _____ TEACHER _____

Time of class _____ Time of class _____

Periods _____ Periods _____

Enrollment _____ Enrollment _____

POSITIVE REACTIONS TO THE PROJECT:

MAJOR ACTIVITIES OR OCCUPATIONAL AREAS AND ACCOMPLISHMENTS DURING THIS PERIOD:

MAJOR UNITS OR OCCUPATIONS DISCUSSED AND EXPLORED:

SIGNIFICANT FINDINGS AND EVENTS:
List results and/or Hands-on experience

2272

PROBLEMS?NEEDS:

DISSEMINATION ACTIVITIES:

OTHER ACTIVITIES:

STAFF UTILIZATION:

FUTURE ACTIVITIES PLANNED:

SUGGESTIONS FOR OVERALL IMPROVEMENT:

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SUMMARY OF 1970-71 Summer Workshop

The Curriculum Development and Inservice Training of the Exemplary and CVET Programs was conducted June 7, 1971 through June 25, 1971.

There were 15 participants from the Exemplary Program and 14 participants from the CVET Program. All Exemplary people attended at least two weeks and most three weeks. Two CVET instructors could only attend one week but all others attended two and three weeks.

The workshop was attended by the teachers actively involved in the programs on the elementary, junior high and senior high level. There were consultants from the Vocational, Technical and Industrial Education Department, Home and Family Life Department and the Business Education Department.

The Curriculum Development was divided into three areas, three days was spent with AMIDS on orientation; two days were spent with representatives from the Oklahoma State Department of Curriculum Development on the writing of Behavioral Objectives; the remaining time was spent in the writing of units of instruction for the areas involved.

The majority of those attending felt too much time was spent on AMIDS presentation as it was the second time for a number of those attending and they felt a slight review would have been more beneficial, leaving more time for curriculum writing.

Several mentioned the fact that problems were identified, but no solutions were offered. Particular mention was made in several replies that Mrs. J. Hall, the black instructor, was so prejudiced that her usefulness was limited.

The consensus of opinion seemed to be that nothing new was presented. Those hearing it for the first time (Exemplary instructors) found it more interesting but too long and detailed.

The O.S.U. Curriculum Writing Team was highly praised. All felt the sessions were well-planned and very helpful in all areas. Mr. Bob Patton was a splendid instructor and was explicit in what he wanted them to accomplish during this workshop. All felt that the time spent in these two days was highly beneficial.

It was recommended that the O.S.U. Team be asked to come for five days next year and that the presentation be utilized in other workshops, conferences and in-service courses in the Tulsa system.

2274

EXEMPLARY OCCUPATIONAL ORIENTATION PROJECT

Director: Morris Ruley
Evaluator: An outside agency to be contracted later
Evaluation Consultants: Paul I. McCloud and Mary Joe Keatley
Project Schools: Irving, Jefferson, Johnson, Lincoln, Longfellow, Lowell, Pershing, and Riverview Elementary Schools, Horace Mann and Roosevelt Junior High Schools, and Central High School

Project Description

The purpose of this project is to provide occupational information and guidance for disadvantaged students early enough to allow them to make realistic future vocational choices. Students will gain an awareness of the wide range of occupational opportunities available, a realization of how education helps to prepare them for jobs and careers, a feeling of respect for the world of work, and an understanding of their capabilities and limitations.

The project is designed in a sequential pattern through the three educational levels. The curricular content of the project progresses from very general information in fifth grade to specific skills training in the senior high.

Elementary

The elementary phase of the project (Introduction to Occupations) provides occupational orientation for pupils in the fifth and sixth grades. Voluntary special interest clubs in areas such as electronics, horticulture, cooking, drawing, and any other broad career areas meet one day a week after school. Volunteer sponsors from business and career areas work with the teacher-sponsors to furnish the pupils with general occupational information from the world of work.

Junior High

The seventh grade phase of the project provides an orientation and exploration of occupations program in the regular industrial arts, homemaking or business education classes. Students are exposed to various careers so they will be able to decide if they are interested in exploring certain career clusters in more depth at a later time. The program is not aimed at decision-making, but at providing students with an opportunity to be exposed to as many different kinds of jobs and careers as possible over a one year period.

The program for eighth and ninth grade students (career exploration) is designed to provide information and actual "hands-on" experiences in clusters or families of occupations in the world of work. This

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phase is a logical step following the orientation and exploration phase in that it provides students an opportunity to explore in depth certain job clusters--construction, manufacturing, power, transportation and service, business, office, clerical and sales, home and community services, and health occupations. This exploration will provide students with a more realistic understanding of careers and a better knowledge base upon which to make sound decisions concerning preparation for a job.

Senior High

The skill training phase of the program is for tenth grade students at Central. This portion of the project is devoted to skill training in an occupational cluster selected by the student as a result of his previous experiences in the program. After students have completed their skill training at the tenth grade level, they will go into either the regular vocational program in a local high school, the area vocational school, or one of the cooperative programs.

Project Objectives

Elementary

1. To develop in students an interest in the world of work.

2. To help students relate their preferences to the educational requirements and job tasks needed in various occupations.

Junior High

1. To develop students' knowledge of how to gain entry into and to succeed in the world of work.

2. To increase the students' knowledge of the jobs and occupations within various occupational families.

3. To increase the students' knowledge of vocational preferences and capabilities.

Senior High

1. To assist students to narrow their vocational choice to one cluster or occupational family.

2. To offer students sufficient exposure to the skills and related information in a vocational field to facilitate their career planning.

3. To develop students' entry level vocational skills in selected occupations.

Evaluation Procedures

The evaluation of this project will be conducted by an outside

agency (@ 8% of $141,000 = $11,280), as required in the terms of the contract. The local evaluation consultants will monitor the evaluation in process and react to the final evaluation findings of the outside agency.

At this time the focus of the evaluation is on grades seven through ten. The objectives in the junior and senior high schools will be evaluated with instruments being developed by Dr. Mary Joe Keatly, Director of the Department of Psychological Services. The items for the instruments will be administered to students in the project schools in October and again in May to determine changes in pupils' knowledge, skills, or interests during the project year.

The local evaluation consultants are to meet with the project teachers on October 16, 1971, to explain the plan of evaluation, to finalize the evaluation instruments, and to set up procedures for the administration of the instruments to project students in October and again in May.

The outside evaluation agency will be responsible for determining the evaluation procedures to be followed in the elementary schools and for designing further evaluation procedures for the junior and senior high levels. They will gather, process, analyze, and interpres all evaluation data, and will prepare a comprehensive report of the findings.

The Department of Instructional Research will cooperate with the outside evaluation agency in their conduct of the evaluation, and will interpret their findings to the administrative staff of the Tulsa Public Schools.

October 18, 1971

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Special Vocational Education
Tulsa Public Schools
CVET-Exemplary Programs

BIBLIOGRAPHY
OF
LOCALLY-PRODUCED CURRICULUM AND INSTRUCTIONAL MATERIALS

Elementary Curriculum Guides

Unit I	The World of Work Club
Unit II	Elementary World of Work - Personal Development
Unit III	Jobs and Job Families
Unit IV	Basic Occupational Terms
Unit V	Occupation - Policeman
Unit VI	Service Occupations
Unit VII	Construction
Unit VIII	Home Community Services
Unit IX	Health Service
Unit X	Driving Occupations
Unit XI	Space: Its Career Possibilities
Unit XII	Business Office and Clerical Occupations

CURRICULUM GUIDES IN INDUSTRIAL EDUCATION, 8 THROUGH 10 GRADES

A. CONSTRUCTION

Unit I	Carpentry
Unit I-A	Building a Wall Section
Unit I-B	Drywall Installation
Unit II	Masonry
Unit III	Electricity (Not developed)
Unit IV	Drafting, Basic Measurement

B. SERVICE OCCUPATIONS

Unit I Interior Maintenance

Unit I-A Replacement of Electrical Appliance Cord

Unit II Exterior Maintenance

C. MANUFACTURING

Unit I Orientation

Unit II Safety

Unit III Hand Tools

Unit IV Production Line Work

Unit V Furniture Refinishing

D. GUIDANCE

Unit I Class Orientation

Unit II School Orientation

CURRICULUM GUIDES IN INDUSTRIAL EDUCATION, 8 THROUGH 9 GRADES

A. SMALL ENGINE MECHANICS

Unit I Power Mechanic Orientation

Unit II Power Mechanic Tools

Unit III Shop Terminology

Unit IV Small Engine Parts

Unit V Small Engine Function

Unit V-B Strokes of a 4-Cycle Engine

Unit VI Disassembly

Unit VII Reassembly

Unit VIII Occupational Careers

Unit IX Body Fender Repair

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B. FILLING STATION ATTENDANT

Unit I Under Hood Checks

Unit II-A Filter System Check

Unit II-B Maintenance of Filters

Unit III External Check

Unit IV Cleaning The Car

Unit V Records and Communications

Unit VI Personal Characteristics and Salesmanship

C. CAREER OPPORTUNITIES

Unit I Career Opportunities

CURRICULUM GUIDES IN HOME, COMMUNITY AND HEALTH OCCUPATIONS, 8 THROUGH 10 GRADES

A. CHILD CARE

Unit I Orientation To Child Care

Unit II Child Care: Feeding, Bathing, and Laundry

Unit III Child Care: Behavior and Discipline

Unit IV Child Care: Creative Activities

Unit V Child Care: Responsibilities and Characteristics of a Good Baby Sitter

B. DOMESTIC SERVICES

Unit VI Cleaning

Unit VII Laundry

C. PERSONAL DEVELOPMENT

Unit VIII Care of Hair

Unit IX Care of Skin and Complexion

Unit X Clothing

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Unit XI Good Posture (Incomplete)

Unit XII Personality

D. SEWING SERVICES

Unit XIII Crafts

Unit XIV Knowledge, Operation, and Safety of the Sewing Machine

E. ORIENTATION TO FOOD SERVICE INDUSTRY

Unit I Personnel Training

Unit II Job Analysis

Unit III-A Waiter or Waitress-Personal Traits

Unit III-B Waiter and Waitress

F. HEALTH OCCUPATIONS

Unit I First Aid

Unit II Home Nursing

G. GUIDANCE

Unit I Finding A Job

Unit II Going For A Job Interview

Unit III Using Bank Services

CURRICULUM GUIDES IN BUSINESS, CLERICAL AND SALES OCCUPATIONS, 8 AND 9 GRADES

Unit I Filing

Unit II Duplicating Machines

Unit III Ten-Key Adding Machine

Unit IV Switchboard Operator

Unit V Secretary and Stenographer

BIBLIOGRAPHY
OF
STATE PRODUCED CURRICULUM AND INSTRUCTIONAL MATERIALS

GENERAL CONSTRUCTION TRADES

Unit I	Safety
Unit II	Concrete Form Building and Reinforcing Steel
Unit III	Mortar
Unit I	Cement and Concrete
Unit I	Tools and Equipment
Unit I	Carpentry
Unit II	Wood Fasteners
Unit V	Lumber Sizes and Their Uses
Unit I	Plumbing
Unit II	Plumbing
Unit II	Painting, Safety, Measuring, and Estimating
Unit III	Painting, Preparation of Surface
Unit I	Electricity
Unit III	Electricity

GENERAL MECHANICAL TRADES

Unit I	Safety
Unit II	Tool Identification
Unit III	Fasteners and Related Hardware
Unit IV	Small Engines - Lubrication
Unit V	Small Engines Service

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SMALL GASOLINE ENGINES

Unit I	Four Cycle
Unit II	Two Cycle Operation
Unit III	Replacing Rewind Starter Rope To Recoil Spring

GENERAL METAL WORKING

Unit I	Measurement
Unit II	General Metal Work

GENERAL MECHANICAL REPAIR

Unit I	Electrical Soldering
Unit V	Gas Welding
Unit VI	Proper Use of the Cutting Torch and Cutting Flat Plate
Unit III	Arc Welding

GUIDANCE

Unit I	Know Yourself
Unit II	Importance of School Records
Unit III	Social Security Card
Unit IV	Employment Agencies
Unit V	Filling Out an Application
Unit VI	Going on a Job Interview
Unit VII	Employer Expectations
Unit VIII	Job Benefits
Unit IX	Salary and Deductions
Unit X	Time Cards
Unit XI	Business Etiquette

HOME AND COMMUNITY SERVICE

Unit I	Orientation to Child Care
Unit II	Child Care: Feeding, Bathing and Laundry
Unit III	Child Care: Behavior and Discipline
Unit IV	Child Care: Creative Activities

CONSUMER EDUCATION

Unit I	Budgeting
Unit II	Banking
Unit III	"Buy Now, Pay Later"

FOOD SERVICE

Unit I	Food Service and Safety
Unit II	Food Service Occupations - Short Orders

CLOTHING SERVICES

Unit I	Getting to Know Your Machine
Unit II	Practice Operation of the Unthreaded Sewing Machine
Unit III	Threading the Upper Part of the Sewing Machine

HEALTH SERVICES

Unit I	Vocational and Home Nursing

Special Vocational Education
Tulsa Public Schools
CVET-Exemplary Programs
Grades 5-12

BIBLIOGRAPHY
of
COMMERCIALLY PRODUCED CURRICULUM AND INSTRUCTIONAL MATERIALS

EXEMPLARY PROGRAM

Project No. 0-361-0123
Contract No. OEC-0-71-0530 (361)

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Oklahoma State Department of Vocational and Technical Education
and the
Tulsa Public Schools
Tulsa, Oklahoma
1970-1971

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BIBLIOGRAPHY
of
COMMERCIALLY PRODUCED CURRICULUM AND INSTRUCTIONAL MATERIALS

Used in Grades 5-12

Films from Encyclopaedia Britannica Educational Corp. (ungraded) Color

Carpenters	#S81201	$22.00
Cement Masons	#S81202	22.00
Plumbers and Pipefitters	#S81206	22.00
Electricians	#S81207	22.00
Over-the-Road Truckdrivers	#S81209	22.00
Firefighters	#S81214	22.00
Licensed Practical Nurses	#S81218	22.00
Registered Professional Nurses	#S81220	22.00
Air Conditioning and Refrigeration Mechanics	#S81221	22.00
Automotive Body Repairman	#S81222	22.00
Automobile Mechanics	#S81223	22.00
Cooks and Chefs	#S81227	22.00
Waiters and Waitresses	#S81228	22.00
Cosmetologists	#S81229	22.00
Appliance Servicemen	#S81235	22.00
Machining Occupations - Electronics	#S81238	22.00
Customer Service Occupations	#S81240	22.00
Gasoline Service Station Attendants	#S81243	22.00
Welders, Oxygen and Arc Cutters	#S81245	22.00
Salesmen and Saleswomen in Retail Stores	#S81249	22.00

Science Research Associates WIDENING OCCUPATIONAL ROLES KIT, $158.50
Grades 6-9, contains 5 filmstrips, 400 Occupational Briefs,
35 Student Record Books, 5 Junior
Guidance Booklets and 1 Teacher's Manual

Denoyer-Geppert, WONDERFUL WORLD OF WORK PROGRAM, 4-6 Series 165.00
24 color filmstrips with records and Teaching Guides
Introductory Package WOW #600061

Society for Visual Education, Inc., FOUNDATIONS FOR OCCUPATIONAL
PLANNING - Set of 5 captioned Filmstrips #778-SA 27.00

Denoyer-Geppert, Times Mirror, 5325 Ravenswood Ave., Chicago, Ill.,
60640, WORLD OF WORK Pre-Vocational Filmstrips, color, contains
teachers guide and review sections
Packet One - AN INTRODUCTION
Packet Two - IMPORTANCE OF THE HAND
Packet Three - THE UTILITIES
Packet Four - DISTRIBUTIVE OCCUPATIONS
Packet Four - OFFICE OCCUPATIONS
PACKET FIVE - NATURAL RESOURCES
Packet Five - PERSONAL SERVICES
Packet Five - TECHNICAL AND INDUSTRIAL
Packet Six - HOME ECONOMICS

2286

Imperial International Learning Tapes of actual on-the-job Interviews, Grades 9-12

Appliance Servicemen	VG702	$5.50
Cosmetologist	VG707	5.50
Draftsmen	VG709	5.50
Electrician	VG710	5.50
Machinist	VG716	5.50
Nurse, Practical	VG719	5.50
Policeman	VG724	5.50
Retail Saleswoman	VG729	5.50
Stewardess, Airline	VG731	5.50
TV and Radio Serviceman	VG734	5.50
Local Truck Driver	VG737	5.50
Grocery Store Clerk	VG739	5.50
Carpenter	VG744	5.50
Auto Mechanic	VG747	5.50

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Job Opportunities for Inner City Youths

Science Research Associates, OCCUPATIONAL EXPLORATION KIT Grades 9-12, #5-2100 SRA, OccuScan coding device that pinpoints each occupation in terms of the education and abilities it requires and interests satisfies, contains 400 Occupational Briefs, Job Family Booklets, 8 Guidance Series Booklets, 25 Student Record Books, Guide for Counselor and Teachers 107.50

Science Research Associates, WIDENING OCCUPATIONAL ROLES KIT, Grades 6-9, #5-2200 SRA 158.50

5 Filmstrips, 400 Occupational Briefs, 35 Student Record Books, 5 Junior Guidance Booklets, 1 Teacher's Manual

J. C. Penny Co. Filmstrips; Education and Consumer Relations CAREER DECISIONS: FINDING, GETTING AND KEEPING A JOB, #83891 72.25

Ealing Film Loops, Cartridged Super 8

Portable Electric Saw, T 92-2047	24.95
Striking an Arc and Running A Bead, T 92-1064	24.95
Butt Welding, T 9201072	24.95
Fillet and Lap Welding, T 92-1080	24.95
Vertical Welding, T 92-1106	24.95
Safe Set-Up Procedure, T 92-1007	24.95
Cutting, T 92-1049	24.95
Saber Saw, T 92-2013	24.95

World of Construction Innovative Program, McKnight & McKnight Publishing Co., Blooming, Illinois

World of Construction - Textbook	4.98
World of Construction - Teacher's Guide	15.00

World of Construction Innovative Program (Con't)

Laboratory Manual (2 Vol.) World of Construction	1.50
Achievement Test (25/set of 10 tests) World of Construction	15.00
World of Construction, COMMUNITY PLANNING GAME	15.00
Organization Chart	
Apparatus and Special Equipment for World of Construction:	
Big Builder Game	7.00
Employment Role Playing Cards	5.00
Working Drawings	9.00
Builders' Supply Catalog	1.50
Bow Drill	5.40
Typographical Mapping Set	9.60
Soil Testing	8.75
Site Box Model Obstacles	16.80
Filmstrip set (5)	37.70
Transparency set (83)	195.00
Surveying/Large Site Box	30.00
Jenny Winch Boom	128.00
Steel Superstructure	282.00
Demonstration Set for Plumbing	34.80

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Joint Council on Economic Education, MANPOWER AND ECONOMIC EDUCATION, Phillip E. Powell, Robert L. Darcy, #96	3.50
National School Public Relations Association, VOCATIONAL EDUCATION: INNOVATIONS REVOLUTIONIZE CAREER TRAINING (#411-12780)	4.00
OCCUPATIONAL OUTLOOK HANDBOOK, Bulletin #1650, 1970-71 Edition, Bureau of Labor Statistics, U.S. Department of Labor	6.25
Education Service Center, Region XIII, Austin, Texas, ELEMENTARY GUIDE FOR CAREER DEVELOPMENT	5.00
OCCUPATIONAL MANPOWER AND TRAINING NEEDS, U. S. Department of Labor, Bulletin #1701	.75
SRA JOB FAMILY Series Booklets, Grades 7-14, #5-600 Complete set of 20 booklets	21.00

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COMMERCIALLY PRODUCED MATERIAL USED IN INSERVICE WORKSHOP

Texas Tech University, Home Economics Instructional Materials Center, P.O. Box 4067, Lubbock, Texas 79409

CHILD CARE AIDE - Teacher Copy	$10.00
CLOTHING ASSISTANT - Teacher Copy	10.00
DIETICIAN - Teacher Copy	10.00
FOOD SERVICE EMPLOYEE - Teacher Copy	10.00
HOMEFURNISHINGS AIDE - Teacher Copy	10.50
HOUSEKEEPING MANAGEMENT ASSISTANT - Teacher Copy	9.50
HANDBOOK	3.50
ORIENTATION	
Part One and Part Two	13.00

Verl A. Teeter, 4515 East 31st St., Tulsa, Oklahoma, 74135

GUIDELINES FOR SUCCESSFUL AND EFFECTIVE LIVING	4.00
Test Books	N/C
Workbooks	2.00

American Institutes For Research, 135 North Bellefield Avenue, Pittsburgh, Pennsylvania 15213

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Innovative Programs in Industrial Arts, Order #30570	1.50
Career Information: Business and Office Occupations, Order #32470	.60

2289

VT 017 631
TENNESSEE EMPLOYMENT OUTLOOK INDUSTRIES AND OCCUPATIONS 1969-1975. PART 1.

MEMPHIS STATE UNIV., TENN. CENTER FOR MANPOWER STUDIES.; TENNESSEE DEPT. OF EMPLOYMENT SECURITY, NASHVILLE. RESEARCH AND STATISTICS SECTION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - APR72 59P.

DESCRIPTORS - OCCUPATIONAL SURVEYS; *STATE SURVEYS; EMPLOYMENT PATTERNS; *EMPLOYMENT TRENDS; *INDUSTRY; *OCCUPATIONS; *EMPLOYMENT PROJECTIONS
IDENTIFIERS - *TENNESSEE

ABSTRACT - PRESENTED ARE THE EMPLOYMENT PROJECTIONS FOR THE STATE OF TENNESSEE COVERING THE YEARS 1969 THROUGH 1975, WHICH PROVIDE THE BASE INFORMATION FOR DETERMINING FUTURE RESOURCE ALLOCATIONS FOR JOB TRAINING EFFORTS AND VOCATIONAL PROGRAMS. PROJECTIONS ARE MADE BY INDIVIDUAL INDUSTRY AND BY OCCUPATIONS. THE OCCUPATIONS AROUND WHICH PROJECTIONS WERE MADE INCLUDE PROFESSIONAL, PERSONNEL, TECHNICAL WORKERS, MANAGERS, OFFICIALS AND PROPRIETORS, CLERICAL WORKERS, MACHINE OPERATORS, SERVICE WORKERS, FARMERS AND FARM WORKERS, AND MINERS. SUPPLEMENTING THE SURVEY ARE TABLES AND GRAPHS. (SN)

VT 017 631

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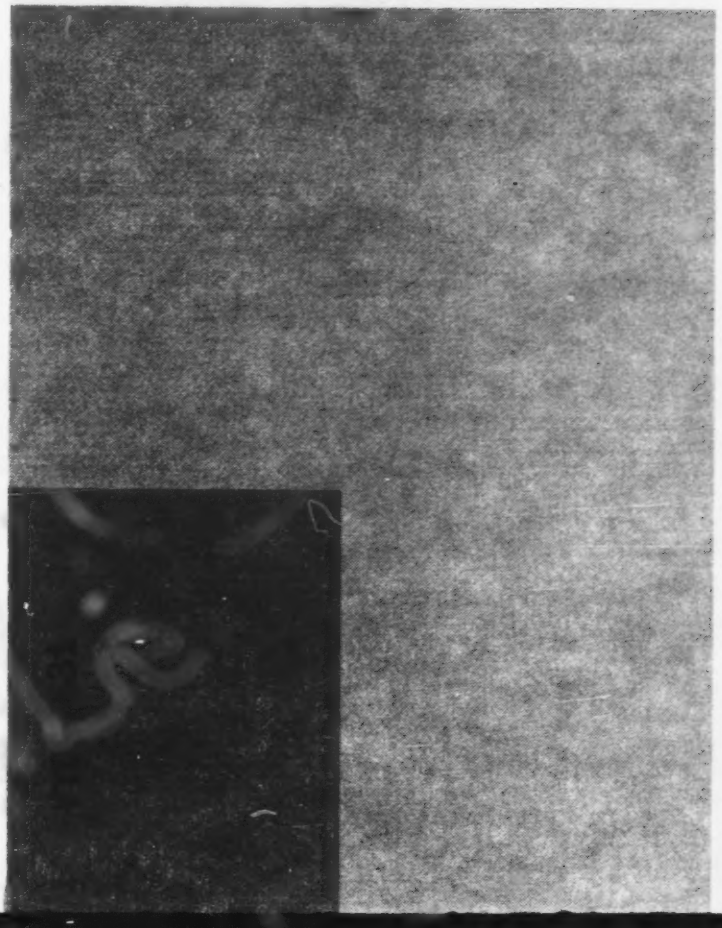
TENNESSEE EMPLOYMENT OUTLOOK

INDUSTRIES AND OCCUPATIONS

STATEWIDE 1969 - 1975



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U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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TENNESSEE EMPLOYMENT OUTLOOK
INDUSTRIES AND OCCUPATIONS 1969-1975

PART I

State of Tennessee
Winfield Dunn
Governor

Department of Employment Security
Ernest Griggs
Commissioner

Prepared by
Research and Statistics Section

and

Center for Manpower Studies
Memphis State University

April 1972

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FOREWORD

Present manpower programs are dedicated toward the simultaneous maximizing of job opportunities and minimizing of unemployment. President Nixon has stated two methods for reaching this goal. "First, to accomplish much needed and long overdue reform of the manpower program set up under the Manpower Development and Training Act and subsequent legislative and thus increase their effectiveness in enhancing the employability of jobless workers: and, second to move toward a broader national manpower policy which will be an important adjunct of economic policy in achieving our Nation's economic and social objectives.

This extensive effort to increase the skill level of our unemployed workers needs some type of direction in order to decide what occupational programs should be geared toward where the demand for workers lies and what type and how much training is needed. It is hoped that occupational projections will contribute significantly in performing this function.

This study represents a joint effort between the Research and Statistics Section of the Tennessee Department of Employment Security and Memphis State University, Center for Manpower Studies. Special appreciation and recognition is owed to Beatrice Hubbard of the Research and Statistics Section of the Tennessee Department of Employment Security for her hard work and dedication to this project. Other staff members contributing significantly to the research and writing were William R. Schriver, Director, Center for Manpower Studies, Robert McCormick, research assistant for the Center for Manpower Studies, Robert M. Beck, statistician for Research and Statistics, and Ormond C. Corry, contributing consultant.

The Southeastern Regional Office of the U. S. Department of Labor provided expert guidance during the course of this project. Special technical assistance was rendered by John Sherman of the Atlanta Office.

INTRODUCTION

It was stated in the 1972 Manpower Report to the President that, "There are few issues of greater concern today, to the Congress and to the President, than the state of the American Economy. We are passing through a period when the economy was inflated by the strain of war to a time when it will be challenged by the needs of peace."

The current state of the economy is also influenced by the increases in the labor force which resulted from the coming of age of youth born during the 1940's and 1950's, by increased labor force participation rates of the population and, especially by accelerating technological changes. The national total labor force is now some 84 millions in comparison with 72 millions in 1960. The inflation is hopefully being moderated but unemployment remains disturbingly high. For Tennessee, employment increased by about 300,000 during the 1960's and the unemployment rate has continued well below the national average rate.

The expanding labor force and the changing technologies made more critical the issues of the amount, kinds and quality levels of education and training needed to meet the industry demands for employment, of the unemployed persons as well as of the new entrants to the labor force. Support for education at all levels was increased but a failure of the total educational system to provide adequate vocational-technical education below the 4-year college level resulted in greater emphasis being placed on it in federal, state and local manpower policies and programs, especially so for Tennessee.

During the past decade in Tennessee, where vocational education had lagged well below the national level, 26 state area vocational schools, 3 state technical

institutes and 9 state community colleges were established largely through the increased availability of federal funds. Vocation education courses and student counseling were also expanded and introduced in most of the public high schools. Special skill training activities for the unemployed and minority groups were conducted in most communities of the state.

The practical, pragmatic nature of vocational education requires that the skills taught be those demanded by industry when the student enters the labor force if not throughout his productive life. But employment opportunities are determined by the shifting relative numbers to be needed in each occupation in all industries. Projections of these occupational employment numbers are measures of the relative opportunities. Thus, the projection of future manpower needs was included in a congressional mandate to the U. S. Department of Labor in 1963.

In carrying out Congress' mandate the Department's Bureau of Labor Statistics projected to 1975 the distribution of total national employment numbers by industry with a cross classification by occupation. The "national matrix" of the projections was tentatively completed in 1966 and published in Tommorrow's Manpower Needs (BLS Bulletin No. 1606) in 1969. Specifically, the matrix was a table of the ratios of change between the percentage distributions of 1960 estimated or recorded and 1975 projected employments in 116 industries and 162 occupations. Historical trends were applied in projecting the changes in the percentage distributions of occupational employment in each of the industries.

The procedures developed in the BLS bulletin and recommended for state and local agency application was that of applying the national matrix ratios, or appropriately adjusted ones, to state and local projected employment by industry to yield the projected employment by occupation. BLS provided the state

employment security and labor department staffs with detailed procedural guides for making the industry employment projections and applying the matrix ratios. Also BLS provided computer services when needed in checking and completing the industry projections, applying the matrix ratios and cross tabulating the resulting occupational numbers. The data for Tennessee reported here were developed with this kind of assistance from BLS.

The logical explanation of the procedures developed by BLS is that industries expand or contract in absolute and relative employment numbers at differing rates. At the same time the occupational composition of each industry changes under the influence of technological innovation. The result of the combined changes is a restructuring of the occupational distribution of total or all-industry employment. The BLS matrix is a projection of the relative shifts in occupational composition of the industries. Its use with the projections of employment by industry then yields the future composition of total employment.

However deaths and retirements over time require that large numbers of persons be replaced over the whole range of occupations at the same time that total employment is changing. The Tennessee projected replacement numbers are about twice the industry growth numbers projected for the 1969 to 1975 period and reported here. There are variations by occupation due to several factors including relative sex composition of employment and physical hazards of the occupation. Transfers between occupations and migrations out of the state or local area may also need to be accounted for and added to industry growth and replacement numbers to get the total number of potential job openings in the several occupations.

The total openings may be filled by drawing upon the pool of currently unemployed persons and on new entrants to the labor force. A major part of manpower planning is thus directed toward providing the education and training which will help qualify persons for the job openings in a number of occupations. The projected data provide guides to the occupations upon which the greater emphasis should be placed. Also, as summarized in a 1967 Manpower Administration bulletin,[1] the projections serve:

1. To alert Government (and other interested parties) to emerging manpower problems: commonly, an imbalance between the demand and supply of workers in the labor force.

2. To help choose between alternative proposed policies.

3. To assist in administering specific Government programs.

4. To provide an essential element for developing other general types of projections by Government and private organizations.

5. To provide information for vocational guidance of young people interested in choosing a field of work.

6. To encourage an informed and responsible public concern for manpower problems; and to help provide the ordinary citizen with information which would be of use to him in his role as a citizen, and apart from that of an economic producer.

1. Manpower Projections: An Appraisal and a Plan of Action (U. S. Department of Labor, Manpower Administration, August 1967), pp. 22-25. Quoted in Occupational Manpower and Training Needs: Information for Planning Training Programs for the 1970's (U. S. Department of Labor, Bureau of Labor Statistics, 1971, Bulletin No. 1701) p. 2.

A most practical and immediate use of the projected openings is to match them on an average annual basis with the aggregate numbers completing corresponding occupational education and training courses or otherwise qualifying themselves for employment. Persons entering the professional and higher level technical fields are much more mobile as to place of employment than are the

graduates of the vocational schools. Their numbers would need to be matched with openings of at least a state or regional basis. But for a large proportion of the entrants to the labor force the demand for workers as represented by the projected annual opening can be matched against the supply originating in a labor market area, or a state planning region or development district.

Descriptions of the job content of occupations and the educational and training needed for entry into them are available from a number of sources. The more convenient ones are the more recent U. S. Department of Labor bulletins. The most complete detail is in the Biennial Dictionary of Occupational Titles. The biennially published Occupational Outlook Handbook (BLS Bulletin No. 1700) places emphasis on the information needed for vocational counseling. The bulletin directly useful for matching the projected annual job opening with the numbers of persons being trained for employment in occupations is titled Occupational Manpower and Training Needs: Information for Planning Training Programs for the 1970's (BLS Bulletin No. 1701).

These sources have been used in the selection and comments on the projections included in the text of this part of the report. Attention is directed first to the projected employment of industries by major group. The "growth" elements included in projected total job openings by occupation for the 1969-75 period are included in Appendix Table A. Likewise the projected job openings by detailed occupations for the period and broken down as openings arising from industry growth, replacements and their total is shown in an appendix (B). The discussion of openings by occupation includes a summary table of selected data in which the projected openings are expressed in terms of their annual averages for the 1969-75 period.

This publication represents Part I of a two part study. Part II of the study will be a separate publication which will extend the projection data to the nine state planning regions or development districts and include as much of the information on matching education and training numbers by occupation as is available.

INDUSTRY EMPLOYMENT GROWTH TRENDS

In the BLS procedures applied in this study the first step is that of projecting employment by industry. These projections made for a total of 116 industries in Tennessee, as shown in Appendix A, are summarized by broad industry group in the following paragraphs. The projections are those of the aggregate employment change over the projection period. Of more importance for this study, they reflect the shifts in the relative numbers employed or in the industry mix and thus changes in the occupational composition of total employment. For instance the indicated further decline in agricultural and increase in manufacturing industry employment means that substantial changes may be expected in the numbers in the occupations affected.

Table 1 provides comparative employment trend data for Tennessee and the nation as a whole. It may be noted that the annual growth rates for all industries are shown as being 1.9 percent for both the state and nation but that there are marked differences in the rates for several of the industry groups. In Table 2 and accompanying Chart 1 the comparative percentage distributions of total employment in Tennessee for 1960, 1969 and 1975 are shown. The differences in shares for agriculture and manufacturing are quite marked as is the increase indicated for the services group.

TOTAL EMPLOYMENT IN THE U.S. AND TENNESSEE WITH ANNUAL GROWTH RATES 1960-1975

	EMPLOYMENT				ANNUAL GROWTH RATES 1960-1975	
	United States		Tennessee			
	1960	1975	1960	1975	U.S.	Tenn.
Agriculture, Forestry & Fishery. . . .	5,591	3,360	198.0	96.6	- 3.5	- 5.0
Mining	720	585	8.2	8.4	- 1.4	+ .2
Contract Construction.	4,056	5,600	80.1	118.2	+ 2.2	+ 2.7
Manufacturing.	17,144	21,330	327.0	527.0	+ 1.5	+ 3.2
Durable Goods	9,701	12,665	120.9	227.0	+ 1.8	+ 4.3
Nondurable Goods	7,443	8,665	206.1	300.0	+ 1.0	+ 2.6
Transportation Comm. & Public Util. .	4,508	5,340	76.2	97.7	+ 1.1	+ 1.5
Wholesale & Retail Trade	13,210	16,870	246.6	327.6	+ 1.7	+ 2.1
Wholesale Trade.	3,161	4,220	61.4	90.8	+ 2.0	+ 2.6
Retail Trade	10,049	12,650	185.2	236.8	+ 1.5	+ 1.6
Finance, Insurance & Real Estate . . .	2,832	4,040	45.7	70.1	+ 2.4	+ 2.9
Services	14,508	25,240	291.9	433.8	+ 3.7	+ 2.7
Public Administration.	3,209	3,025	45.7	66.4	+ 3.1	+ 2.5
TOTAL	65,778	87,390	1319.4	1745.8	+ 1.9	+ 1.9

PERCENT DISTRIBUTION OF TOTAL EMPLOYMENT BY MAJOR INDUSTRIES
IN TENNESSEE, 1960, 1969 AND PROJECTED 1975

	1960		1969		1975	
	Annual Average Employment	Percent Distribution	Annual Average Employment	Percent Distribution	Annual Average Employment	Percent Distribution
A Agriculture, Forestry & Fisherv . . .	198.0	15.0	118.5	7.4	96.6	5.5
B Mining.	8.2	.6	7.8	.5	8.4	.5
C Construction	80.1	6.1	102.9	6.4	118.2	6.8
D Manufacturing	327.0	24.7	482.4	30.0	527.0	30.2
E Transportation, Comm. & Public Util..	76.2	5.8	92.2	5.7	97.7	5.6
F Wholesale & Retail Trade	246.6	18.7	304.0	18.9	327.6	18.8
G Finance, Insurance & Real Estate. . .	45.7	3.5	61.9	3.8	70.1	4.0
H Services.	291.9	22.1	378.1	23.5	433.8	24.8
I Public Administration	45.7	3.5	60.3	3.8	66.4	3.8
TOTAL	1319.4	100	1608.1	100	1745.8	100

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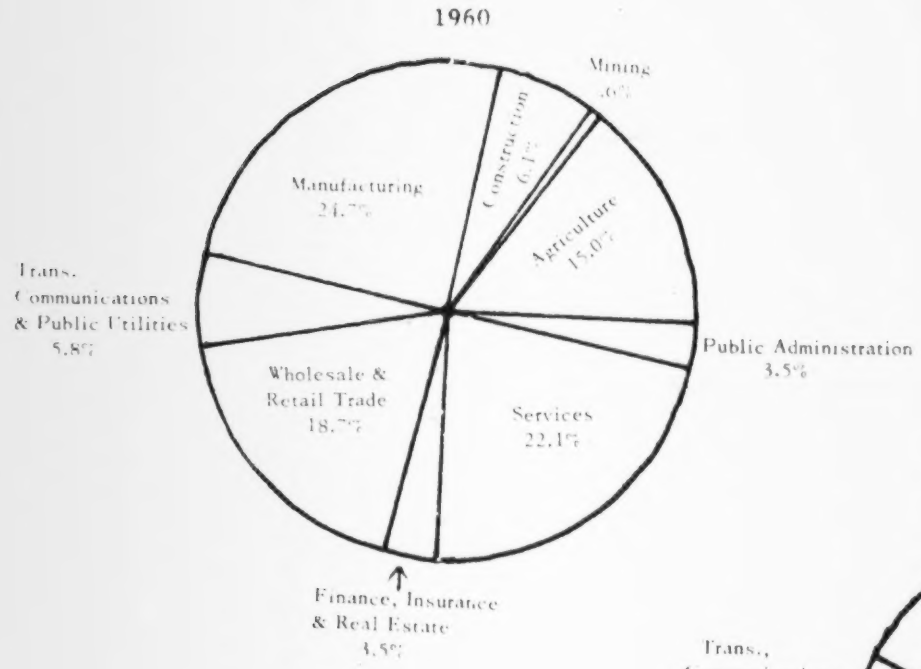
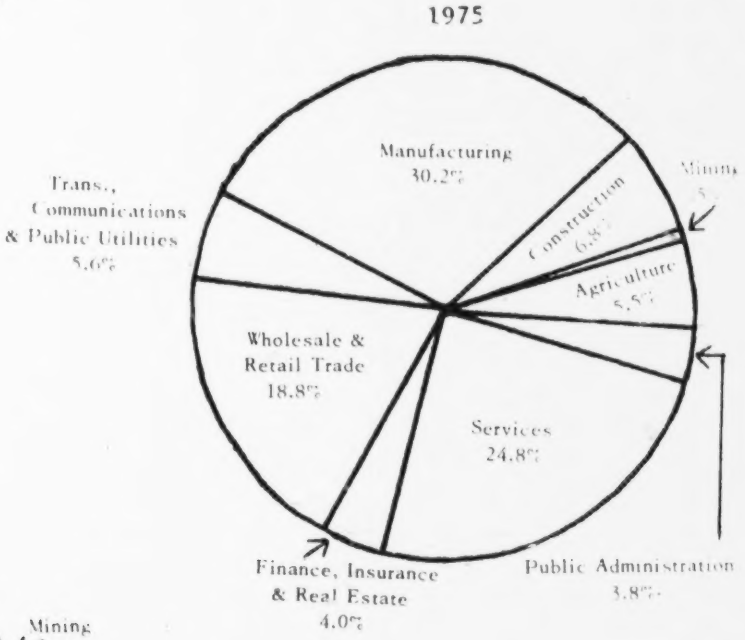
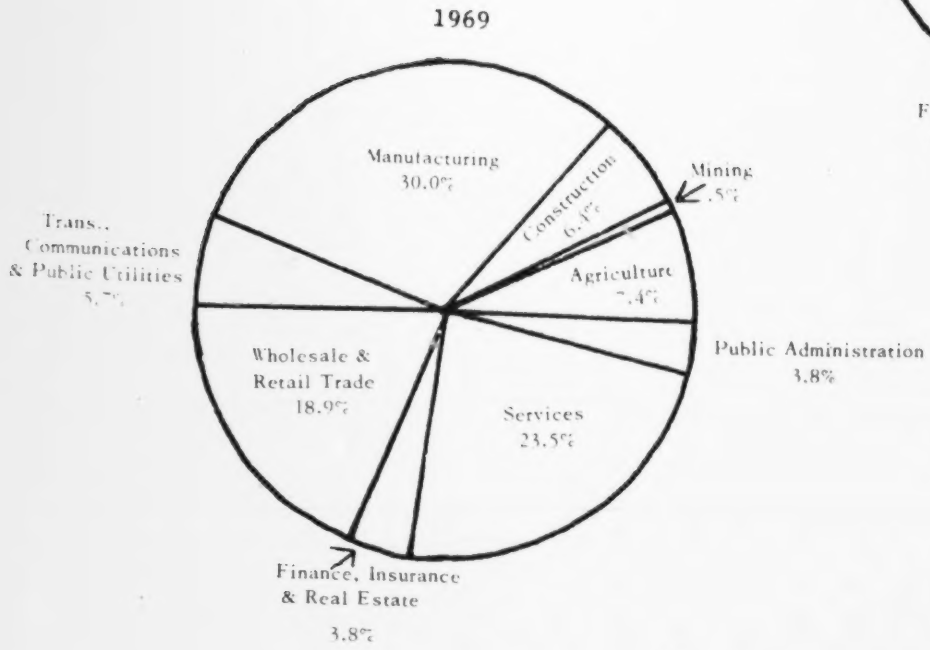
EMPLOYMENT DISTRIBUTION BY INDUSTRY – 1960, 1969 AND PROJECTED 1975







INDUSTRY EMPLOYMENT TRENDS

Agriculture

The United States is in the midst of an agricultural revolution which is shaping employment trends into patterns previously inexperienced in the industry. The essence of this metamorphosis is based on a rapid mechanization of farm processes. This has two major results. First, increased mechanization raises production capacity which must be fully utilized in order to lower marginal costs. As a result, smaller farmers who possess a capital shortage which precludes automation of the farm processes are being squeezed out of the market. Secondly, automation has significantly reduced the amount of man-hours needed to produce similar volumes and consequently has reduced the demand for farm laborers.

These trends are established in the 1975 employment projections. Agricultural employment in 1960 in Tennessee was 198.0. Realizing a negative growth rate of 5.0% over the next fifteen years, employment plummeted to 96.6. This trend was similar to the national one except that it was more pronounced. The national growth rate in Agriculture over this period was -3.5%.

The same trend is also exhibited when the portion of total employment comprised of agricultural employment is viewed. In 1960 15.0% of all employment fell into the Agriculture classification. This figure decreased to 7.4% in 1969. The projected employment for 1975 would further reduce the percentage of total employment to 5.5%.

Mining

Employment in mining is expected to decline slowly through the 1970's, despite increases in output. Increased demand for mining projects will be met

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largely through the use of improved equipment operated by a more highly skilled work force. Even though employment as a whole is expected to decline, different growth patterns are likely within the industry. Employment in coal mining probably will decline more rapidly than employment in metal mining and petroleum and natural gas extraction. Employment in quarrying and nonmetallic mining, on the other hand, is expected to increase.

Employment in the mining industry shows a slight decrease in the period 1960 to 1975. The 1960 employment level of 720 dropped by 1.4% per year during the time-span mentioned above. At this rate, projected employment totals in 1975 would be 585. The Tennessee figures portray a different situation. Employment from 1960 to 1975 increased from 8.2 to 8.4 which is a .2% growth rate. However, the percentage of total employment in the mining industry receded from .6% in 1960 to .5% in 1975.

Construction

Through the 1970's, employment requirements are expected to rise rapidly in the construction industry. As the national economy expands, as population increases, and as personal and corporate incomes rise, the demand for contract construction activities are expected to undergo a substantial increase. Likewise, the number of construction workers employed by State and local highway departments also is expected to increase because of the need to meet the demands of the country's expanding highway systems. Even though employment in the construction industry is likely to grow, the increasing application of the latest technology in tools, material, and work methods, together with the rising skill level of the work force, will make it possible to increase the level of construction activity without a correspondingly large increase in employment.

Construction is one of the fastest growing industries employment wise in Tennessee. The number of workers in this classification rose from 80.1 in 1960 to 118.2 in 1975. This represented an annual growth rate of 2.7% which was higher than the national rate of 2.2% increase . The construction industry also raised its percentage of total employment from 6.1% to 6.8% over the same fifteen year period.

Manufacturing

Manufacturing is the core of our free-enterprise system. It is the process which, in addition to providing the finished project, refines raw materials into intermediate goods. It is responsive to consumer desires by setting volume levels of production. It also affects the consumer's demand by formulating the sale price of an item on the basis of cost of production. As an industry, it provides jobs for over 30% of the total work force. In short, manufacturing is integrally involved with every facet of the labor and goods markets.

Population growth, rising personal income, and expanding business activity will stimulate a substantial increase in the demand for manufactured products through the 1970's. The increase in demand will outweigh the increase in employment since technological labor-saving devices make it possible to significantly increase production of goods without a rise in the work force. The improving skill level of the work force also contributes to the situation. Although the average rate of employment growth will be slow, employment trends of individual industries within manufacturing will vary widely. In the rubber and miscellaneous plastics products and furniture and fixtures industries, employment is expected to increase about one-third, far above the average increase. Employment in several other industries - including machinery, apparel,

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Projections for 1975 call for an employment level of 97.7 up from 76.2 in 1960. This is a growth rate of 1.5% annually which exceeds by .4% the national figure. The percentage of total employment which this industry holds is projected to decline slowly to 5.6% in 1975. This represents a .2% decrease from 1960.

Wholesale and Retail Trade

Due to growth in population and increased consumer demands, fostered somewhat by greater urbanization, employment in the wholesale and retail trade is expected to increase during the 1970's. The gain will be tempered by increasing mechanization materials, handling, packaging, inventory control, and billing operations.

Within retail trade employment in department stores, drug stores, restaurants, auto dealerships and service stations is expected to rise the fastest. Among wholesale establishments, the rates of employment growth are likely to be highest in businesses that distribute auto parts, and in firms selling industrial machinery, equipment and supplies.

Employment in this area in 1960 was 246.6. The projected figures show a 2.1% annual growth rate resulting in a figure of 327.6 for employment. This is a greater growth than the 2.0% rate projected for the U. S. as a whole. Individually, the wholesale section is expected to increase at a 2.6% annual rate while retail trade expands at a 1.6% annual rate.

The percentage of the total labor market cornered by this industry will remain fairly stable. Projections for 1975 show a slight increase to 18.8%, up from 18.7% in 1960. This makes it the third largest employment category.

Finance, Insurance and Real Estate

Employment in this industry is expected to increase moderately through

instruments, and stone, clay and glass - is expected to increase more rapidly than the average for all manufacturing. Petroleum refining, tobacco, food, and textiles all may decrease in employment during the 1970's.

Employment growth in the manufacturing industry in Tennessee is projected to rise over twice as fast as the national figures. The increase in employment from 327 to 527 provides Tennessee with an annual growth rate of 3.2% as opposed to the U. S. growth rate of 1.5%. Much of this gain comes from Durable Goods in which area employment rose at a 4.3% annual rate.

Percentagewise - employment in the manufacturing industry in Tennessee has increased greatly. In 1960 this area accounted for 24.7% of all employment. This portion was elevated to 30.2 in 1975 projections.

Transportation, Communication and Public Utilities

Employment in Transportation is expected to increase slowly through the 1970's. Increased demand for air travel and business expansion will elevate employment in the air and trucking industries. Some decline is expected in local transportation and railroad employment.

Employment in communications is expected to grow slowly through the 1970's. Although demand for the industry's services will increase rapidly, advances in technology are expected to limit employment growth, particularly in telephone communications.

Employment in electric and gas utilities also will be affected strongly by advancing technology and employment will grow slowly despite rapid increases in output. Substantial improvements in electric generating equipment through the increasing use of nuclear power, electronic controls, and improved coal-handling techniques, as well as more efficient methods of constructing and maintaining transmission lines will limit employment growth in this industry.

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the 1970's as a result of population growth, increasing business activity, and rising personal incomes. However, increasing use of computers for routine clerical and recordkeeping functions may limit employment growth to some extent. Employment is expected to increase more rapidly in the financial sector than in insurance and real estate.

After manufacturing, finance, insurance and real estate encompasses the fastest growing industry in Tennessee. The annual growth rate from 1960-1975 is projected as 2.9% enabling employment in this area to increase from 45.7 to 70.1. The growth in Tennessee exceeds the U. S. increase by .5% annually.

The percentage of total employment covered by this industry has also steadily increased. Projections for 1975 predict a figure of 4.0%, up from the 1960 figure of 3.5%.

Services

Employment in the service is forecasted to show an impressive increase on a national basis through the 1970's. Important factors contributing to this rise include increasing demand for services due to population growth, expanding business activity, rising personal incomes, and the general awareness of the benefits that educational, health and other services can provide. Perhaps even more important is the fact that the service industry's employment will not be as adversely affected as that in other industries by technological innovation. The reason for this is that extensive person-to-person contact in many situations.

Employment in the service industry in Tennessee is also expected to increase during the 1970's. However, projections show that the increase will be from 291.9 in 1960 to 433.8 in 1975. This represents an annual growth rate of 2.7%. This figure becomes very interesting when compared to the national

growth rate of 3.7%. Tennessee's growth in employment in the service industry therefore, will be significantly lower than the nationwide level of growth over the coming years.

The percentage of total employment of the service industry shows a steady but slow decline over the period covered. The 1960 percentage of 22.1% rose to 23.5% in 1969. The 1975 projected figure is 24.8%.

Public Administration

Employment in the Public Administration industry is expected to increase rapidly during the coming period. This gain reflects the increasing demand for services from an ever-growing population and enlarged domestic and international programs. However, the growth of employment will be limited somewhat by increased use of labor-saving electronic data-processing and materials - handling equipment and the introduction of improved data - transmission and communications systems.

Employment in the public administration area in Tennessee is expected to grow, but at a slower rate than national growth. Employment projections show a 66.4 level reached in 1975 up from the 45.7 level in 1960. The annual growth rate of 2.5 is below the national level of 3.1%.

OCCUPATIONAL EMPLOYMENT TRENDS TO 1975

The occupational data projected for use in this study is designed primarily to be helpful to persons planning and administering manpower programs. Also the data can serve a more general interest to give perspectives as to the scope of educational programs needed, the allocations of resources to support them, and the relative emphasis which should be placed on occupations in the programs.

Knowledge of the job content and qualifications for entering and pursuing an occupation, and of the large variety of paths that may be followed to gain entry to most occupations, are among the prerequsites for interpreting and making use of the projections in manpower programs. For instance, the numbers employed and the projected annual opening for employment, even if the same for two occupations, have meaning in manpower program planning only in terms of what the specific occupations are. Thus, however specific the detailed projections may appear they remain only additional evidence for consideration in the total subjective process of manpower program planning and administration.

Certain occupations, such as medical doctors and certified public accountants have educational levels, entry examinations and years of background experience prescribed by statute or state boards. Apprenticeship and formal or informal on-job training may be used to qualify craftsmen. The private business college, or trade school (or institute) can succeed only if the students qualify for and gain entry in their chosen occupations. Expanding technology has made a basic education through at least high school necessary for most apprenticeship, on-job training and public or private vocational school courses. Only the common laborer may need no formal education and only the dropout, hard core unemployed

person in the crash training programs may be admitted with the most limited educational background.

Projections of employment numbers and job openings carry no implication that the occupations of small numbers or even small changes in numbers are not significant. The full range of occupations and implied job specializations is needed in our highly complex economy. Thus the projections for Tennessee occupations in the most practical detail, with the total job opening arising from expansion and replacement needs, are included in the Appendix B table. Chart 2 provides a graphic comparison of the employed numbers by broad occupational classification for 1960 and 1969 and as projected in this study for 1975.

Since manpower programs need to be directed to the most strategic problems and these are best indicated by relative numbers, the projected data have been condensed and adapted in Table 3 to show only the occupations with .005 (½ half of 1)percent or more of the total number of projected job openings. Three kinds of percentage measures are used in the table. The percentage change in the numbers projected to be employed in the occupations is shown in the third column. The average annual number (for the six-year period) of total projected opening and the percentage distribution of the aggregate are shown in the next two columns. Probably the most meaningful relationships between occupations are those shown in the last three columns. These are the total opening and the expansion-replacement need detail as shares of the 1969 or projection base year employment numbers.

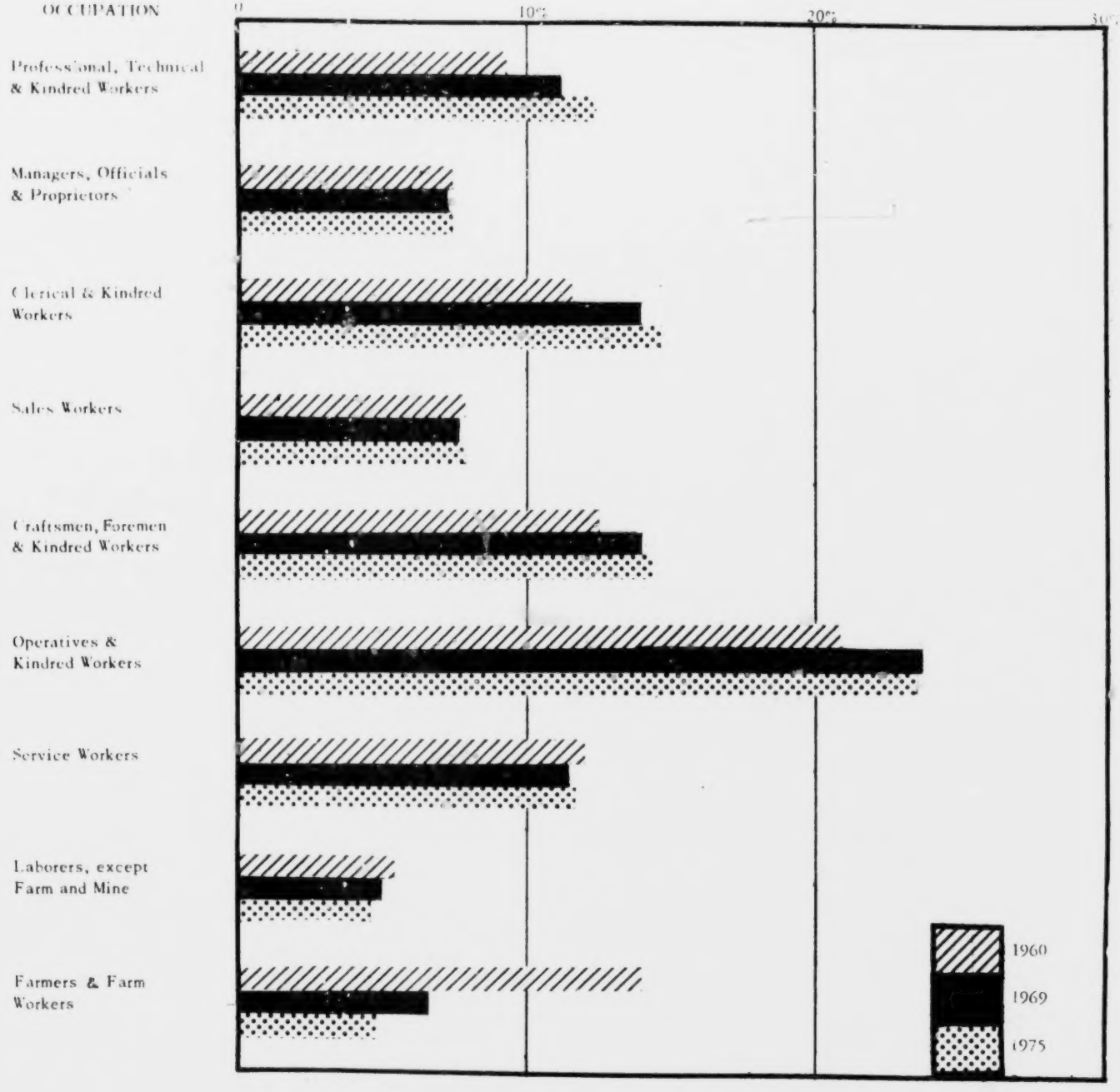
The remainder of this Part 1 of the report presents 1) summary statements of trends, 2) general information about the nature and employment entry qualifications, and 3) projections of job openings from industry employment expansion and from replacement of workers who die or retire, each for selected

occupations within the several broad occupational categories. Here the selection has been made from the occupations listed in Appendix B to indicate something of the range of qualifications or vocational preparations needed rather than the projected number of openings.

Reference was made in the introductory section above to the extensive descriptive materials and aids available on discription of occupations, the training needs and other information relating to applying the projections in manpower program planning and administration. Among the information sources named was the BLS Bulletin No. 1700, Occupational Outlook Handbook, 1972-73 Edition. What could be said here about training needs, work experience and other qualifying factors for entry into occupations would parallel statements included in this bulletin. Therefore, liberal use has been made of the statements as direct quotations from the bulletin. Only a parenthetical page reference is included at the end of the statement used.

A major omission from this part of the report has been the available information on the numbers trained or otherwise becoming qualified for employment by occupations. These are the enrollments or course completions primarily of the vocational schools and comparable institutions for most of the occupations. Their use is for matching with the employment openings by occupation: the supply compared with the demand to indicate the extent to which needs are being met. These materials are included in Part 2 of the report with the state total projections from Appendix B allocated by state planning or development district and with most emphasis placed on the groups of occupations of most interest to vocation-technical education.

BROAD OCCUPATIONAL GROUPS AS A PERCENT OF TOTAL EMPLOYMENT IN TENNESSEE
1960, 1969 & PROJECTIONS TO 1975



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OCCUPATIONAL EMPLOYMENT TRENDS

BROAD OCCUPATIONAL GROUPINGS

Professional, Technical and Kindred

In 1960 there were approximately 122,300 professional, technical and kindred workers, which comprised 9.3% of the total employment. By 1969, the employment figure had grown to 180,300 or 12.2%. The projected figures for 1975 are on employment of 213,250, which remains 12.2% of total employment. Over the 15 year span rank by size changed two places from sixth in 1960 to fourth in 1975. Over 60,000 total openings will be initiated between 1969 - 1975 which is 14.0% of the total.

Most jobs in professional and related fields require at least a bachelor's degree. However, some jobs require one or more advanced degrees while for others two years of training in a junior college, technical institute, or specialized school is adequate. Another group of professionals which includes performing artists and athletes place a higher premium on skill and creative talent than academics. In many professions either licenses are required to practice or professional societies define membership standards to limit their fields. (22)

Employment 1969.	180,270
Projected 1975 employment. . . .	213,250
Percent growth 1969 - 1975 . . .	18.3
Openings 1969 - 1975 total . . .	60,340
Expansions	32,975
Replacements	27,365
Annual Avg. Openings 1969-1975 .	10,057

Managers, Officials and Proprietors

Employment in 1960 was approximately 97,200 in this category to rank seventh among the nine broad occupational groupings. These workers represented 7.4% of total employment. By 1969 employment had risen to 118,120 or

8.0% of total emplovment. The projections for 1975 indicate a rise in rank to sixth on the basis of 128,150 workers or 7.3% of total emplovment. Approximatelv 25,600 jobs will be available between 1969 - 1975 - nearlv 6% of total openings.

A college degree has become increasinglv important in terms of promotional opportunities into managerial positions. For beginning management positions each emplover looks for different qualifications. Concentration in the areas of economics, finance or more technical areas of engineering and science are generallv preferred bv emplovers. The number of companies that have formal management trainee programs is relativelv small. As a result, entrance to manv management jobs comes after several vears of progressivelv more responsible work experience. (40)

Emplovment 1969, ...	118,120
Projected 1975 emplovment . . .	128,150
Percent growth 1969 - 1975 . . .	8.5
Openings 1969 - 1975 total . . .	25,600
Expansions	10,030
Replacements	15,570
Annual Avg. Openings 1969-1975 :	4,267

Clerical and Kindred Workers

This group is one of the fastest growing of the nine broad occupations. Emplovment projections predict a rise from 152,850 in 1960 to 254,360 in 1975. Such an occurrence will bring about a change in rank from fifth to second with 14.6% of total emplovment. It also represents a percentage growth of 13.3% between the vear 1969 - 1975. In terms of total openings clerical and kindred workers is the highest with 85,800 or 19.6%.

For all but the most routine clerical positions, the minimum educational requirement is usuallv graduation from high school. High school graduates who have had instruction in business subjects are regarded bv most emplovers

as particularly well-qualified. Qualifications for many types of clerical work include reading comprehension, a knowledge of spelling and grammar, and ability in arithmetic. Practically all beginning clerical workers receive some on-the-job training. (41)

Employment 1969.	224,430
Projected 1975 employment . . .	254,360
Percent growth 1969 - 1975 . . .	13.3
Openings 1969 - 1975 total . . .	85,800
Expansions	29,940
Replacements	55,860
Annual Avg. Openings 1969-1975 .	14,300

Sales

Employment increased from 91,590 in 1960 to 107,610 in 1969 to a projected high of 119,660 in 1975. The percentage of total population is the same in 1975 - 6.9% - as it was in 1960. However, the ranking by size increased from eighth to seventh. Total openings are 37,850 which is 8.7% of all openings.

The educational paths of salesmen vary widely. In routine jobs no specializing training is required. However, a high school diploma is an asset to a beginning jobseeker. A salesman who sells complex products sometimes receives training which lasts many months. Many of these positions require a college major related to the products or services being sold. Salesmen dealing in specialized areas may need technical knowledge taught by universities or manufacturers supplemented by on-the-job experience or home study. (43)

Employment 1969.	107,610
Projected 1975 employment. . . .	119,660
Percent growth 1969 - 1975 . . .	11.1
Openings 1969 - 1975 total . . .	37,850
Expansions	12,050
Replacements	25,800
Annual Avg. Openings 1969-1975 .	6,308

Craftsmen, Foremen and Kindred

This category retained its third place ranking from 1960 through 1975. However, the absolute figures for employment increased from 164,510 in 1960

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to 251,960 in 1975. This resulted in an increase in percentage of total employment from 12.5% to 14.4%. Total openings were 53,020 which was also ranked third with 12.1% of total openings.

A large proportion of skilled workers learn the trades through informal on-the-job training and experience. Many others learn their trade through apprenticeship or other formal training programs. Many companies have training programs that also provide on-the-job training supplemented by classroom instruction. In addition, many young men acquire skills in the Armed Forces which enable them to qualify, with additional training for skilled jobs in civilian life. (48)

Employment 1969.	225,340
Projected 1975 employment. . . .	251,960
Percent growth 1969 - 1975 . . .	11.8
Openings 1969 - 1975 total . . .	53,020
Expansions	26,620
Replacements	26,400
Annual Avg. Openings 1969-1975 .	8,837

Operatives and Kindred

This largest category grew in employment from 275,870 in 1960 to 411,520 in 1975. The share of total employment also increased from 20.9% to 23.6%. Openings during the 1969 - 1975 period are listed at 85,100 indicating the greatest need for workers in 1969 - 1975 period.

These workers ordinarily receive only brief on-the-job training. Significant investment in education is not necessary for workers in these jobs. Even the most difficult of jobs in this classification can be learned in a few weeks or months. (60)

Employment 1969.	381,930
Projected 1975 employment. . . .	411,520
Percent growth 1969 - 1975 . . .	7.7
Openings 1969 - 1975 total . . .	85,100
Expansions	29,600
Replacements	55,500
Annual Avg. Openings 1969-1975 .	14,183

Service Workers

The employment level of 158,270 in 1960 is projected to increase to 204,670 in 1975. However, this represents a decline from 12.0% of total employment to 11.7% and a loss of rank from fourth to fifth. Openings number 70,490 during the 1969 - 1975 period which is third highest at 16.1% of total openings.

Training and skill requirements differ greatly among various service occupations. Some jobs require a college or advanced degree while others need specialized vocational training. Many service occupations have no specific educational requirements although a high school diploma is an advantage. (45)

Employment 1969.	184,510
Projected 1975 employment. . . .	204,670
Percent growth 1969 - 1975 . . .	10.9
Openings 1969 - 1975 total . . .	70,490
Expansions	20,160
Replacements	50,330
Annual Avg. Openings 1969-1975 .	11,748

Laborers Excluding Farm and Mine

Laborers decreased in size over the period of 1969 - 1975. Rank remained the same (9) but the percentage of total employment decreased from 5.4% in 1960 to a projected 4.5% in 1975. Employment also decreased from 80,320 in 1969 to 78,770. This established a negative percent growth of 2.3%. Openings for the 1969 - 1975 period are 6,250 or 1.4% of the total -- again ranked ninth. Much of the decline is attributable to increased automation in the laboring class.

Much of the work of non-farm laborers involves simple tasks that require little special training. Brief instruction and a few hours of on-the-job training usually are sufficient for a job as a non-farm laborer. (64)

Emplovment 1969.	80,320
Projected 1975 emplovment. . . .	78,770
Percent growth 1969 - 1975 . . .	(-2.3%)
Openings 1969 - 1975 total . . .	6,250
Expansions	(-1,850)
Replacements	8,100
Annual Avg. Openings 1969-1975 .	1,042

Farm and Farm Workers

Emplovment in this area decreased during the 1960 to 1969 period from 184,950 to 105,610. Projected 1975 emplovment figures indicate another decline of 20.7% to a level of 83,720. In 1960 this categorv ranked second in size. Projections for 1975 indicate it will plummett to eighth. The percentage of total emplovment comprised of farm and farm workers will dip to 4.8% in 1975 as opposed to 14.0% in 1960. A wage-cost squeeze has forced more rapid implementation of automated equipment. This process has also forced the marginal farmer into other fields. Approximatelv 90,000 workers will be needed on the farm between 1969 and 1975. Expansion needs will decline nearlv 22,000, however, this will be tempered somewhat bv replacement needs of over 10,000.

Most jobs will continue in the unskilled categorv, but as mechanization increases higher skill levels will be required. The traditional view of the farmer and farm worker as a relativelv uneducated, but still shrewd student of nature is not applicable to current generation. The farmer todav has a large investment in land and equipment and must be skilled in a varietv of tasks as well as in more and more scientific management practices.

Emplovment 1969.	105,610
Projected 1975 emplovment. . . .	83,725
Percent growth 1969 - 1975 . . .	(-20.7%)
Openings 1969 - 1975 total . . .	(-11,270)
Expansions	(-21,890)
Replacements	10,620
Annual Avg. Openings 1969-1975 .	(-1,878)

SELECTED OCCUPATIONAL GROUPINGS

Accountants and Auditors

Although junior college, business school or correspondence course training is acceptable for some accounting jobs, many positions require the bachelor's degree with a major in accounting and sometimes a master's degree. All states require "certified public accountants" to be certified by the State Board of Accountants. In nearly all states at least two years of public accounting experience is necessary before CPA certification can be issued. About half of the states do not require the CPA candidates to be college graduates. (29)

Employment 1969.	7,575
Projected 1975 employment. . . .	8,290
Percent growth 1969 - 1975 . . .	9.4
Openings 1969 - 1975 total . . .	1,843
Expansions	715
Replacements	1,128
Annual Avg. Openings 1969-1975 .	307

Bartenders

Most bartenders learn their trade on the job. Some private schools offer short courses in bartending that include instructions on State and local laws and regulations, cocktail recipes, attire and conduct, and how to properly stock the bar. Some schools maintain a placement service for their students. Beginners usually find the best entry opportunities in small establishments and resorts. After gaining experience, a bartender may transfer to a large establishment where earnings prospects are likely to be better. (341)

Employment 1969.	3,500
Projected 1975 employment. . . .	3,900
Percent growth 1969 - 1975 . . .	11.4
Openings 1969 - 1975 total . . .	1,066
Expansions	400
Replacements	666
Annual Avg. Openings 1969-1975 .	178

Brickmasons, Stone, Tile Setters

Most qualified bricklayers have served in an apprenticeship program which consists of 6,000 hours of on-the-job training in addition to related classroom instructions. Stone and tile setters participate in a similar apprenticeship program authorized by the National Joint Bricklaying Apprenticeship and Training Committee. (380)

Employment 1969.	5,766
Projected 1975 employment. . . .	6,587
Percent growth 1969 - 1975 . . .	14.2
Openings 1969 - 1975 total . . .	1,379
Expansions	821
Replacements	558
Annual Avg. Openings 1969-1975 .	230

Carpenters

A 4 year apprenticeship program, including 144 hours of related classroom instruction, is recommended. A high school education or its equivalent is desirable. Training may also be obtained through vocational school courses. (383)

Employment 1969.	24,323
Projected 1975 employment. . . .	27,913
Percent growth 1969 - 1975 . . .	14.8
Openings 1969 - 1975 total . . .	7,196
Expansions	3,590
Replacements	3,606
Annual Avg. Openings 1969-1975 .	1,199

Cooks and Chefs

Most cooks - particularly those who work in small eating places - acquire their skills on the job. Less frequently, they are trained as apprentices under trade union contracts or new employee training programs conducted by large hotels and restaurants. Training offered by a number of schools and other institutions is a distinct advantage for applicants seeking jobs as cooks or chefs in some large restaurants or other establishments which provide food. (46)

Emplovment 1969.	16,650
Projected 1975 emplovment. . . .	18,925
Percent growth 1969 - 1975 . . .	13.7
Openings 1969 - 1975 total . . .	6,541
Expansions	2,275
Replacements	4,266
Annual Avg. Openings 1969-1975 .	1,090

Deliverymen and Routemen

In addition to being a good driver, a routeman must have sales ability. Mathematical ability and mechanical ability are also helpful. Most employers require their routemen to be high school graduates. Courses in salesmanship, public speaking, driver-training, bookkeeping, and business arithmetic provide training for entering the occupation. Most states also require a chauffeur's license, which is a commercial driving permit. (435)

Emplovment 1969.	12,352
Projected 1975 emplovment. . . .	13,672
Percent growth 1969 - 1975 . . .	10.7
Openings 1969 - 1975 total . . .	2,412
Expansions	1,320
Replacements	1,092
Annual Avg. Openings 1969-1975 .	402

Draftsmen

Training for draftsmen jobs can come from a variety of sources including technical institutes, junior and community colleges, extension divisions of universities, vocational and technical high schools, and correspondence schools. Course training should include mathematics and physical services as well as mechanical drawing and drafting. (227)

Emplovment 1969.	3,638
Projected 1975 emplovment. . . .	4,340
Percent growth 1969 - 1975 . . .	19.3
Openings 1969 - 1975 total . . .	894
Expansions	702
Replacements	192
Annual Avg. Openings 1969-1975 .	149

Electricians (construction)

A high school education is required for electrician jobs. An apprenticeship program lasting 4 years and including 144 hours of classroom instruction

each year is recommended. During the 1960's apprenticeship completions numbered about 55 percent of openings resulting from growth and death and retirement. Most cities require electricians to pass licensing examinations. Training may also be acquired on the job. Some skills of the trade may also be acquired through vocational school courses. (391)

Employment 1969.	9,291
Projected 1975 employment. . . .	10,879
Percent growth 1969 - 1975 . . .	17.1
Openings 1969 - 1975 total . . .	2,554
Expansions	1,588
Replacements	966
Annual Avg. Openings 1969-1975 .	426

Foremen

Most workers who are promoted to foremen are high school graduates who have learned their skills on the job. Although fewer than one-tenth of all foremen are college graduates, a growing number of employers are hiring foremen trainees with college backgrounds. (370)

Employment 1969.	33,976
Projected 1975 employment. . . .	37,433
Percent growth 1969 - 1975 . . .	10.2
Openings 1969 - 1975 total . . .	7,525
Expansions	3,457
Replacements	4,068
Annual Avg. Openings 1969-1975 .	1,254

Hospital Attendants

High school graduates are preferred for these jobs although most of the training occurs on the job. Training may last several days or continue over a period of a few months, depending on the policies of the hospital, the attendant's aptitude for the work, and the nature of the duties assigned. Many training programs for hospital attendants are aided by funds provided by the Manpower Development and Training Act and the Vocational Education Act. Courses in home nursing and first aid, offered by many public school systems and other community agencies, provide a useful background of knowledge for the work. (355)

Employment 1969.	12,910
Projected 1975 employment. . . .	17,781
Percent growth 1969 - 1975 . . .	37.7
Openings 1969 - 1975 total . . .	8,219
Expansions	4,871
Replacements	3,348
Annual Avg. Openings 1969-1975 .	1,370

Lawyers

Most lawyers have completed 4 years of college followed by 3 years of law school. Applicants must be admitted to the bar for court practice. Four years of part-time law study usually is required to complete the night school curriculum. (246)

Employment 1969.	3,996
Projected 1975 employment. . . .	4,440
Percent growth 1969 - 1975 . . .	11.1
Openings 1969 - 1975 total . . .	1,175
Expansions	444
Replacements	732
Annual Avg. Openings 1969-1975 .	196

Librarians

Usually 4 years of college followed by 1 year of training in library science is required for librarians. This training qualifies them for the master's degree. (248)

Employment 1969.	2,300
Projected 1975 employment. . . .	2,805
Percent growth 1969 - 1975 . . .	22.0
Openings 1969 - 1975 total . . .	1,249
Expansions	505
Replacements	744
Annual Avg. Openings 1969-1975 .	208

Machinists

According to most training authorities, a 4-year apprenticeship is the best way to learn the machinist trade. Many machinists, however, have qualified without an apprenticeship by learning the trade through years of varied experience in machinery jobs. A typical machinist apprentice program lasts 4 years and consists of approximately 8,000 hours of shop training and about 570 hours of related classroom instruction. (452)

Emplovment 1969.	13,469
Projected 1975 emplovment. . . .	14,796
Percent growth 1969 - 1975 . . .	9.9
Openings 1969 - 1975 total . . .	3,025
Expansions	1,698
Replacements	1,327
Annual Avg. Openings 1969-1975 .	504

Mechanics, Automobile

Most automobile mechanics learn the trade through 3 to 4 years of on-the-job experience. An additional year or two is usually needed to learn a specialty, such as automatic transmission repair. Most training authorities recommend completion of a 3 or 4 year formal apprenticeship program as the best way to learn the trade. Work experience as a gasoline service station attendant, training in the Armed Forces and courses offered at high school, vocational schools, or private trade schools are helpful. (471)

Emplovment 1969.	17,534
Projected 1975 emplovment. . . .	20,049
Percent growth 1969 - 1975 . . .	14.3
Openings 1969 - 1975 total . . .	3,979
Expansions	2,515
Replacements	1,464
Annual Avg. Openings 1969-1975 .	663

Medical and Dental Technicians (Laboratory)

The usual minimum educational requirement for beginning medical technologists is 4 years of college including completion of a specialized training program in medical technology approved by the American Medical Association. Some technicians have gained their training from the Armed Forces or vocational and technical schools. (122)

Although no minimum formal education is needed to become a dental laboratory technician, a high school diploma is an asset. Typically on-the-job training lasts 3 or 4 years. Some training can be received from junior colleges and post-secondary educational institutions. (89)

Employment 1969.	4,650
Projected 1975 employment. . . .	5,990
Percent growth 1969 - 1975 . . .	28.8
Openings 1969 - 1975 total . . .	2,522
Expansions	1,340
Replacements	1,182
Annual Avg. Openings 1969-1975 .	420

Nurses, Licensed Practical

All states and the District of Columbia license practical nurses. Usually only candidates who have completed a course in practical nursing and passed an examination are licensed. Generally, at least two years of high school must be completed to enroll in practical nursing courses. (94)

Employment 1969.	6,918
Projected 1975 employment. . . .	8,437
Percent growth 1969 - 1975 . . .	22.0
Openings 1969 - 1975 total . . .	4,057
Expansions	2,538
Replacements	1,519
Annual Avg. Openings 1969-1975 .	676

Nurses, Professional

A license is required to practice professional nursing in all states and the District of Columbia. Graduation from a school approved by a State Board of nursing and successful completion of a State Board examination are necessary for licensing. All schools of nursing require a high school diploma for admission. Nursing education programs vary in length from 2 to 5 years. Nurses who complete 2 year courses earn associate degrees: those in 3 year programs, a diploma: and students in 4 or 5 year courses are awarded the bachelor's degree. (91)

Employment 1969.	11,705
Projected 1975 employment. . . .	13,650
Percent growth 1969 - 1975 . . .	16.6
Openings 1969 - 1975 total . . .	5,599
Expansions	1,945
Replacements	3,654
Annual Avg. Openings 1969-1975 .	933

Operators, Office Machines

Graduation from high school or business school is the minimum educational

requirement for all but the most routine office machine operator jobs. The necessary amount of training dealing with business machines varies by type of machine used. (292)

Employment 1969.	5,826
Projected 1975 employment. . . .	7,561
Percent growth 1969 - 1975 . . .	29.8
Openings 1969 - 1975 total . . .	3,337
Expansions	1,735
Replacements	1,602
Annual Avg. Openings 1969-1975 .	556

Personnel and Labor Relations

A college education is becoming increasingly important for entrance into personnel work. Some employers hire new graduates for junior positions, and then provide training programs to acquaint them with their operations, policies and problems. Other employers prefer to fill their personnel positions by transferring people who already have firsthand knowledge of operations. A large number of the people now in personnel work who are not college graduates entered the field in this way. (37)

Employment 1969.	2,820
Projected 1975 employment. . . .	4,075
Percent growth 1969 - 1975 . . .	44.5
Openings 1969 - 1975 total . . .	1,525
Expansions	1,255
Replacements	270
Annual Avg. Openings 1969-1975 .	254

Pharmacists

A bachelor's degree in pharmacy is the minimum educational requirement for most positions in this profession. In addition to the necessary education, a license is required to practice pharmacy. To obtain a license, one must graduate from an accredited pharmacy college, pass a State Board examination, and in most states, also have one year of practical experience or internship. The master's or doctor's degree in pharmacy or a related field usually is required for research or college teaching, and is desirable for work in hospitals. (107)

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Employment 1969.	2,228
Projected 1975 employment. . . .	2,425
Percent growth 1969 - 1975 . . .	8.8
Openings 1969 - 1975 total . . .	587
Expansions	197
Replacements	390
Annual Avg. Openings 1969-1975 .	98

Physicians

A license to practice medicine is required in all states and the District of Columbia. To qualify for a license, a physician must graduate from an approved medical school and in most states, serve a 1 year internship. Most medical schools require entrants to have completed at least 3 years of college education for admission, and some require 4 years Most entering students have completed requirements for a bachelor's degree. (77)

Employment 1969.	4,538
Projected 1975 employment. . . .	5,025
Percent growth 1969 - 1975 . . .	10.7
Openings 1969 - 1975 total . . .	1,207
Expansions	487
Replacements	720
Annual Avg. Openings 1969-1975 .	201

Plumbers and Pipefitters

A formal 5-year apprenticeship for plumbers and pipefitters is the recommended method for training. The program usually consists of 10,000 hours of on-the-job training, in addition to at least 144 hours of related classroom instruction annually. Many workers in these occupations have gained their knowledge through correspondence courses. (413)

Employment 1969.	7,221
Projected 1975 employment. . . .	8,428
Percent growth 1969 - 1975 . . .	16.6
Openings 1969 - 1975 total . . .	2,043
Expansions	1,197
Replacements	846
Annual Avg. Openings 1969-1975 .	341

Private Household Workers

Although a high school diploma is an advantage, no formal education is required for most household workers. (356)

Employment 1969.	49,942
Projected 1975 employment. . . .	50,123
Percent growth 1969 - 1975 . . .	.4
Openings 1969 - 1975 total . . .	17,293
Expansions	181
Replacements	17,112
Annual Avg. Openings 1969-1975 .	2,882

Sewers and Stitchers, Hand Apparel

Training requirements for production jobs in the apparel industry range from a few weeks of on-the-job training to several months of training and experience. Entry into beginning hand-sewing jobs is relatively easy for young women, since there are few restrictions regarding education and physical condition. Some previous training in sewing operations is preferred, but many apparel plants hire workers who have had no experience in sewing. (624)

Employment 1969.	35,221
Projected 1975 employment. . . .	41,485
Percent growth 1969 - 1975 . . .	17.8
Openings 1969 - 1975 total . . .	16,026
Expansions	6,264
Replacements	9,762
Annual Avg. Openings 1969-1975 .	2,671

Social and Welfare Workers

A bachelor's degree, preferably in social welfare, generally is the minimum educational requirement for beginning jobs in social work. In most fields of practice, certain specialized areas require a master's degree in social work. For teaching positions, a master's is required and a doctorate is preferred. In research work, training in social science research methods is required, in addition to a graduate degree and experience in social work. In most states beginners must pass a written examination in social work for employment in a government agency. (266)

Employment 1969.	2,070
Projected 1975 employment. . . .	2,480
Percent growth 1969 - 1975 . . .	19.8
Openings 1969 - 1975 total . . .	944
Expansions	410
Replacements	534
Annual Avg. Openings 1969-1975 .	157

Stenographers, Secretaries and Typists

Stenographers and secretaries - graduation from high school is essential for practically all secretarial and stenographic positions. Graduates whose high school courses include shorthand, typing and other business subjects meet the requirements of many employers. Some employers prefer having a background of academic high school subjects supplemented by technical training taken after graduation. (299)

Typists - most employers require applicants for typing positions to meet certain standards of speed and accuracy. Typists should have a good understanding of spelling, vocabulary, punctuation, and grammar. Most typists learn their skills by attending day or evening classes in public or private schools. High school graduates generally are preferred by employers. (302)

Employment 1969.	54,776
Projected 1975 employment. . . .	60,885
Percent growth 1969 - 1975 . . .	11.2
Openings 1969 - 1975 total . . .	23,803
Expansions	6,109
Replacements	17,694
Annual Avg. Openings 1969-1975 .	3,967

Teachers, College and University

For most beginning positions at least a master's degree is required. Many require completion of all requirements for a doctorate degree except the dissertation. Specialization in some subject field is necessary to enter college teaching. (216)

Employment 1969.	8,480
Projected 1975 employment. . . .	9,865
Percent growth 1969 - 1975 . . .	16.3
Openings 1969 - 1975 total . . .	2,669
Expansions	1,385
Replacements	1,284
Annual Avg. Openings 1969-1975 .	445

Teachers, Elementary

All states require that teachers in public schools have a certificate. Several states require certification for parochial and private elementary

school teachers. Obtaining a certificate requires at least 4 years of approved college preparation and in some states a fifth year of study toward a master's. (211)

Employment 1969.	28,137
Projected 1975 employment. . . .	29,310
Percent growth 1969 - 1975 . . .	4.2
Openings 1969 - 1975 total . . .	2,919
Expansions	1,173
Replacements	1,746
Annual Avg. Openings 1969-1975 .	487

Waiter and Waitresses

Most waiters and waitresses acquire their skills on-the-job. Increasingly employers prefer that beginners have at least 2 or 3 years of high school. In certain restaurants, knowledge of foreign language may be important. (339)

Employment 1969.	18,824
Projected 1975 employment. . . .	20,780
Percent growth 1969 - 1975 . . .	10.4
Openings 1969 - 1975 total . . .	6,876
Expansions	1,956
Replacements	4,920
Annual Avg. Openings 1969-1975 .	1,146

Welders and Flamecutters

Generally it takes several years of training to become a skilled manual arc or gas welder, and somehwat longer to become a combination welder. Some skilled jobs may require a knowledge of blueprint reading, welding symbols, metal properties, and electricity. Some of the less skilled jobs, however, can be learned after a few months of on-the-job training. For entry in manual welding jobs, most employers prefer to hire young men who have high school or vocational school training in welding methods. Before being assigned to work where the strength of the weld is a highly criticla factor, welders may be required to pass a qualifying examination. Where critical safety factors are involved, certification may be necessary. Some localities require welders to obtain a license before they can do certain types of outside construction work. (571)

Employment 1969.	12,436
Projected 1975 employment. . . .	14,175
Percent growth 1969 - 1975 . . .	14.0
Openings 1969 - 1975 total . . .	2,699
Expansions	1,739
Replacements	960
Annual Avg. Openings 1969-1975 .	450

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TENNESSEE EMPLOYMENT BY SELECTED OCCUPATIONS 1969 AND 1975 WITH PROJECTED AVERAGE ANNUAL OPENINGS FOR PERIOD
(INCLUDES GROUP TOTALS AND OCCUPATIONS WITH 1/2% OR MORE OF TOTAL OPENINGS)

Occupation	Total Number Employed			Average Annual Openings 1969 - 1975				
				Total		Percent of 1969 Employment		
	1969 (Estimated)	1975 (Projected)	Percent Change 1969 to 1975	Number	Percent Distribution	Total Needs	Expansion Needs	Replacement Needs
Total	1,608,141	1,744,216	8.56	68,862	100.00	4.28	1.43	2.86
Professional, Technical & Kindred	180,273	213,247	18.29	10,057	14.60	5.58	3.05	2.53
Engineers, technical	19,996	24,185	20.95	983	1.43	4.92	3.49	1.43
Medical & Other Health Workers	28,139	32,470	15.39	1,909	2.77	6.78	2.57	4.21
Nurses, Professional	11,705	13,650	16.62	933	1.36	7.97	2.78	5.21
Technician, Medical & Dental	4,650	5,990	28.82	420	0.61	9.04	4.80	4.24
All Other*	11,784	12,830	8.88	555	0.81	4.71	1.48	3.23
Teachers	56,957	61,605	8.16	1,990	2.89	3.49	1.36	2.13
Elementary & Secondary	44,552	46,920	5.32	1,237	1.80	2.78	0.88	1.88
College	8,480	9,865	16.33	445	0.64	5.24	2.72	2.52
All Other*	3,925	4,820	22.80	308	0.45	7.85	3.80	4.05
Natural Scientists	5,498	6,455	17.41	222	0.32	4.03	2.90	1.13
Social Scientists	654	795	21.56	34	0.05	5.43	3.59	1.84
Technicians, exc. Medical & Dental	14,128	17,055	20.72	645	0.94	4.56	3.45	1.11
Other Professional, Technical & Kindred	54,991	70,692	28.54	4,273	6.21	7.78	4.79	2.99
Managers, Officials, Proprietors	118,116	128,147	8.49	4,267	6.20	3.61	1.42	2.19
Clerical & Kindred Workers	224,428	254,362	13.34	14,299	20.76	6.37	2.22	4.15
Stenographers, Typists, Secretaries	54,776	60,885	11.15	3,967	5.76	7.24	1.96	5.28
Office Machine Operators	5,826	7,561	29.78	556	0.81	9.55	4.96	4.59
Other Clerical & Kindred Workers	163,826	185,916	13.48	9,776	14.20	5.97	2.25	3.72
Accounting Clerks	8,377	9,010	7.56	484	0.70	5.77	1.26	4.51
Bookkeepers, hand	14,616	15,671	7.22	798	1.16	5.46	1.20	4.26
Bank Tellers	3,533	4,875	37.98	385	0.56	10.89	6.33	4.56
Cashiers	17,001	19,914	17.12	1,177	1.71	6.92	2.85	4.07
Telephone Operators	6,390	6,776	6.04	393	0.57	6.16	1.01	5.15
All Other*	113,907	129,670	13.84	6,539	9.50	5.74	2.31	3.43
Sales Workers	107,614	119,662	11.20	6,308	9.16	5.86	1.86	4.00
Craftsmen, Foremen & Kindred	225,339	251,961	11.81	8,836	12.88	3.92	1.97	1.95
Construction Craftsmen	67,513	77,731	15.13	3,128	4.54	4.63	2.52	2.11
Carpenters	24,323	27,913	14.76	1,199	1.74	4.93	2.46	2.47
Electricians	9,291	10,879	17.09	426	0.62	4.59	2.85	1.73
Painters & Paperhangers	9,067	10,294	13.53	446	0.65	4.92	2.25	2.67
Plumbers & Pipefitters	7,231	8,428	16.55	340	0.49	4.71	2.76	1.95
All Other*	17,601	20,217	14.86	716	1.04	4.07	2.48	1.59

TENNESSEE EMPLOYMENT BY SELECTED OCCUPATIONS 1969 AND 1975 WITH PROJECTED AVERAGE ANNUAL OPENINGS FOR PERIOD
(INCLUDES GROUP TOTALS AND OCCUPATIONS WITH 1/2% OR MORE OF TOTAL OPENINGS)
(Continued)

Occupation	Total Number Employed			Average Annual Openings 1969 - 1975				
				Total		Percent of 1969 Employment		
	1969 (Estimated)	1975 (Projected)	Percent Change 1969 to 1975	Number	Percent Distribution	Total Needs	Expansion Needs	Replacement Needs
Foremen, n.e.c.	33,976	37,433	10.17	1,254	1.82	3.69	1.69	2.00
Metal Working Craftsmen, exc. Mechanics	23,169	25,679	10.83	897	1.29	3.92	1.90	2.02
Machinists & Related Occupations.	13,469	14,796	9.85	504	0.73	3.74	2.10	1.64
All Other*	9,700	10,883	12.20	383	0.56	3.95	1.40	2.55
Mechanics & Repairmen	62,457	69,791	11.74	2,369	3.44	3.79	1.96	1.83
Motor Vehicle Repair.	17,534	20,049	14.34	663	0.96	3.78	2.39	1.39
All Other*	44,923	49,742	10.73	1,706	2.48	3.80	1.79	2.01
Printing Trade Craftsmen.	6,003	6,335	5.53	164	0.24	2.72	0.92	1.80
Transportation & Public Utilities Craftsmen	8,396	9,355	11.55	280	0.41	3.34	1.93	1.42
Other Craftsmen & Kindred	23,835	25,637	7.56	753	1.09	3.16	1.26	1.90
Operatives & Kindred Workers	381,927	411,520	7.75	14,183	20.60	3.71	1.29	2.42
Drivers & Deliverymen	62,705	68,480	9.21	1,771	2.57	2.82	1.53	1.29
Drivers, bus, truck, tractor.	50,353	54,808	8.85	1,368	1.99	2.72	1.48	1.24
Deliverymen, routemen, cab drivers.	12,352	13,672	10.69	402	0.58	3.25	1.78	1.47
Semi-skilled Metal Working Occupations.	32,607	36,144	10.85	1,234	1.79	3.78	1.81	1.97
Welders & Flamecutters.	12,436	14,175	13.98	450	0.65	3.62	2.33	1.29
All Other*	20,171	21,969	8.91	784	1.16	3.88	1.48	2.40
Transportation & Public Utilities Operatives	3,950	4,290	11.43	147	0.21	3.83	1.91	1.92
Semi-skilled Textile Occupations	43,468	49,002	12.74	2,823	4.10	6.49	2.13	4.36
Sewers & Stitchers, Mfgr.	35,221	41,485	17.78	2,671	3.88	7.58	2.96	4.62
All Other*	8,247	7,537	- 8.61	152	0.22	1.84	-1.43	3.27
Other Operatives & Kindred	239,297	253,584	5.97	8,209	11.92	3.43	1.00	2.43
Laundry & Dry Cleaner Operatives	8,978	9,280	3.36	402	0.58	4.48	0.56	3.92
All Other*	230,319	244,304	6.07	7,807	11.34	3.39	1.01	2.38
Service Workers	184,508	204,670	10.93	11,748	17.06	6.37	1.82	4.55
Private Household Workers	49,942	50,123	4.15	2,842	4.19	5.77	5.71	0.06
Protective Service Workers.	12,796	13,617	6.50	516	0.75	4.03	1.08	2.95
Food Service Workers.	42,437	47,862	12.78	2,700	3.92	6.36	2.13	4.23
Cooks, exc. Private Household	16,650	18,925	13.66	1,090	1.58	6.55	2.28	4.27
Waiters & Waitresses.	18,924	20,780	10.39	1,146	1.66	6.09	1.73	4.36
All Other*	6,963	8,157	17.15	464	0.67	6.66	2.86	3.80
Other Service Workers	79,343	93,068	17.30	5,657	8.21	7.13	2.88	4.25
Attendants, Hospital & Other.	12,910	17,781	37.73	1,370	1.99	10.61	6.29	4.32
Janitors & Sextons.	13,339	15,329	14.92	905	1.31	6.78	2.48	4.30
Nurses, Practical	6,918	8,437	21.96	676	0.98	9.77	3.66	6.11
All Other*	46,176	51,521	11.58	2,706	3.93	5.86	1.93	3.93
Laborers, Exc. Farm & Mine.	80,321	78,472	- 2.30	1,042	1.51	1.30	-0.38	1.69
Farmers & Farm Workers.	105,615	83,725	-20.73	-1,878	-2.73	-1.78	-3.45	1.67

* "All Other" is total for occupations with less than 1/2 of 1 percent of projected 1969-1975 total openings. These are shown in Appendix Table 2.

METHODOLOGY

The technique used in obtaining the occupational projections in this study consists of two main stages. First, projections of detailed industry employment were made for the target year, 1975. Second, national industry - occupational matrices were used to develop occupational distributions.

Industry Projections:

The future employment level of individual industries is a primary determinant of occupational requirements because each industry has a unique occupational structure. Estimating future employment in individual industries is a major step in developing occupational employment requirements.

Regression analysis was applied to historical time series of the industries to develop first approximations of the projections. Several regression models were applied to all industries. Each projection was then carefully analysed by labor analysts who were familiar with the labor markets, industrial trends and the economy of the State.

Model a). The relationship between State industry employment and time.

Model b). The relationship between the logarithm of State industry employment and time.

Model c). The relationship between the State industry employment and national industry employment over time.

Model (a) assumes a straight-line trend over time. In Tennessee, it has proven to be an adequate method for many industries. Model (b) was used to fit those series which exhibit a curvilinear rather than linear relationship. The assumption associated with Model (c) is that the employment in certain industries is dependent on national demand over time and that the projected national employment has a very strong influence on the projection of the Tennessee employment those industries.

Each of the regression models is expressed mathematically as follows:

Model a $Y = B_1X_1 + Boo$

Model b $\log Y = B_1X_1 + Boo$

Model c $Y = B_1X_1 + B_2X_2 + Boo$

Where: Y = State employment by detailed industry in 1975

B_1 = Regression coefficient; constant for the first independent variable

X_1 = Time, in years. First independent variable.

B_2 = Regression coefficient; constant for second independent variable.

X_2 = National industry employment projections for 1975 (second independent varilable)

Boo = Constant intercept; the value of dependent variable when the independent variables are zero.

The third model placed a great deal of reliance on national employment projections prepared by the U. S. Bureau of Labor Statistics. The national projections have the advantage of including many more variables than could be considered by most states. In Tennessee, the third method was by far the best in projecting industry employment.

Occupation Projections

The technique used to develop occupational projections presented here relied on the national industry - occupational matrix developed by B.L.S. The 1960 census data with adjustments in some occupations is the primary source for base period estimates for occupations included in the matrix. Since the matrix reflected national staffing patterns, the theoretical

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1960-1975 ratios of change were applied directly to 1960 census data for Tennessee to obtain 1975 occupational estimates that were reflective of local rather than national staffing patterns.

Replacement Needs

The need to replace experienced workers who die, retire or leave the labor force for other reasons is an important determinant of manpower requirements. While expansion needs can be projected as the simple difference between employment in the base and target years, replacement needs are not so easily determined.

The method used in this study relies upon national estimates of annual labor force separation by occupation and by sex. The procedure consists of multiplying the annual separation rate by the number of years in the study period to derive a composite rate for the entire period. This rate was then applied to the average employment during the study period. This procedure was duplicated for both sexes and the two figures derived were added to obtain the replacement needs in a certain occupation.

APPENDIX A

Tennessee Employment Outlook 1969-1975

Statewide Tables

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TENNESSEE EMPLOYMENT PROJECTION BY INDUSTRY TO 1975 *

Industry Title	Employment (000s) 1960	1969	1975	Percent Change 1960-1969	Percent Change 1969-1975
Agriculture, Forestry & Fisheries	198.0	118.5	96.6	- 40.2	- 18.5
Agriculture	196.6	117.0	95.0	- 40.5	- 18.8
Forestry	1.0	1.2	1.2	20.0	0
Fishery	.4	.3	.4	- 25.0	33.3
Mining	8.2	7.8	8.4	- 4.9	7.7
Metal Mining	1.7	2.2	2.5	29.4	13.6
Coal Mining	2.5	2.1	2.4	- 16.0	14.3
Crude Petroleum and Natural Gas	.02	.1	.05		
Quarrying and Nonmetallic Mining	4.0	3.4	3.4	15.0	0
Construction	80.1	102.9	118.2	28.5	14.9
Manufacturing	327.0	482.4	527.0	47.5	9.2
Durable Goods	120.9	203.1	227.0	68.0	11.8
Lumber and Wood Products, Exc. Furniture	21.2	20.8	20.5	- 1.9	- 1.4
Logging camps & contractors	2.3	2.0	2.0	13.0	0
Sawmills, millwork & misc. wood products	18.9	18.8	18.5	- .5	- 1.6
Furniture & Fixtures	16.0	25.7	34.3	60.6	33.5
Stone, Clay & Glass Products	12.8	14.9	17.9	16.4	20.1
Glass & glass products	3.7	5.5	6.7	48.6	21.8
Cement, concrete & plaster	4.0	4.8	6.4	20.0	33.3
Structural clay products	1.7	1.2	1.2	- 29.4	0
Pottery & related products	1.7	1.5	1.4	- 11.8	- 6.7
Misc. nonmetallic mineral & stone products	1.7	1.9	2.2	11.8	15.8
Primary Metals Industries	13.6	20.2	24.2	48.5	19.8
Blast furnaces & steel works	3.6	3.1	3.4	13.9	9.7
Other primary metals industries	3.6	6.8	8.8	100.9	29.4
Primary nonferrous metals	6.4	10.3	12.0	60.9	16.5
Fabricated Metal Products	18.9	39.3	35.4	107.9	- 9.9
Machinery, Exc. Electrical	9.6	18.2	22.6	89.6	24.2
Farm machinery & equipment	2.4	2.9	3.4	- 20.8	17.2
Office machinery	0	0	0	0	0
Miscellaneous machinery	7.2	15.3	19.2	112.5	25.5
Electrical Machinery, Equipment & Supplies	14.7	33.7	37.2	129.3	10.4
Transportation Equipment	6.3	16.7	19.3	165.1	15.6
Motor vehicles & equipment	2.1	5.6	6.5	166.7	16.1
Aircraft & parts	.5	5.2	6.5	940.0	25.0
Ship & boat building	1.6	1.7	2.2	6.2	29.4
Railroad & other transportation equipment	2.1	4.2	4.1	100.0	- 2.4
Instruments & Allied Products	2.0	4.0	4.6	100.0	15.0
Instruments & fire control	1.9	3.5	3.8	84.2	8.6
Watches & clock devices	.1	.5	.8	400.0	60.0
Miscellaneous Manufacturing	5.8	9.6	11.0	65.5	14.6
Nondurable Goods	206.1	279.3	300.0	35.5	7.4
Food & Kindred Products	33.3	36.3	38.5	9.0	6.1
Meat products	6.0	7.5	7.9	25.0	5.3
Dairy products	6.1	5.0	4.8	- 18.0	- 4.0
Canning, preserving & freezing	2.4	2.8	3.0	16.7	7.1
Grain mill products	4.1	4.2	4.4	2.4	4.8
Bakery products	5.6	6.5	7.5	16.1	15.4
Beverage industries	3.5	4.7	5.4	34.3	14.9
Other food products	5.6	5.6	5.5	0	- 1.8
Tobacco Manufacturers	2.1	1.5	1.9	- 40.0	26.7
Textile Mill Products	31.8	36.6	33.7	15.1	7.9
Apparel & Related Products	44.9	66.4	79.5	47.9	19.7
Paper & Allied Products	8.9	14.0	15.3	57.3	9.3
Pulp, paper & paperboard mills	5.5	4.6	4.9	- 16.4	6.5
Paperboard containers & boxes	2.2	5.4	5.4	145.5	0
All other paper products	1.2	4.0	5.0	233.3	25.0
Printing, Publishing & Allied Products	16.0	21.7	23.7	35.6	9.2

* Employment includes private wage and salary, government, self-employed and unpaid family workers.

TENNESSEE EMPLOYMENT PROJECTION BY INDUSTRY TO 1975

Industry Title	Employment (000's) 1960	1969	1975	Percent Change 1960-1969	Percent Change 1969-1975
Chemicals & Allied Products	46.7	67.4	65.6	44.3	[illegible]
Synthetic fibers	19.5	29.5	29.4	51.3	[illegible]
Drugs & medicine	2.1	3.4	3.7	61.9	8.8
Paints, varnishes & related products	.4	.6	.7	50.0	16.7
Other chemicals	24.7	33.9	31.8	37.2	- 6.2
Petroleum Refining & Related Industry	.5	.6	1.3	20.0	116.7
Petroleum refining	.2	.2	.8	0	300.0
Other petroleum & coal products	.3	.4	.5	33.3	25.0
Rubber & Miscellaneous Plastic Products	6.1	12.5	15.8	104.9	26.4
Rubber products	5.4	8.8	10.9	63.0	23.9
Miscellaneous plastic products	.7	3.7	4.9	428.6	32.4
Leather and Leather Products	15.8	22.3	24.7	41.1	10.8
Leather tanning & finishing	.9	.8	1.1	- 11.1	37.5
Footwear, exc. rubber	13.4	19.4	21.0	44.8	8.2
All other leather products	1.5	2.1	2.6	40.0	23.8
Transportation, Communication & Public Utilities	74.2	92.2	97.7	21.0	6.0
Transportation	49.5	53.6	57.6	15.3	7.5
Railroad Transportation	15.4	12.3	12.3	- 20.1	0
Local & Suburban Transit & Inter. Pass.	7.8	7.9	7.8	1.3	- 1.3
Local & interurban	5.9	6.5	6.5	10.2	0
Taxis	1.9	1.4	1.3	- 26.3	- 7.1
Motor Freight Transportation & Storage	20.3	28.2	31.2	38.9	10.6
Trucking	17.8	25.5	28.4	43.3	11.4
Warehousing	2.5	2.7	2.8	8.0	3.7
Water Transportation	.8	1.2	1.5	50.0	25.0
Transportation by Air	1.6	3.1	3.6	93.8	16.1
Pipelines	.03	.05	.06	66.7	20.0
Transportation Services	.6	.9	1.1	50.0	22.2
Communication & Public Utilities	29.7	38.6	40.1	30.0	3.9
Communication	13.7	17.6	17.6	28.5	0
Telephone	10.6	13.7	13.4	29.2	- 2.2
Telegraph	.8	.4	.5	- 50.0	25.0
Radio & television	2.3	3.5	3.7	52.2	5.7
Electric, Gas & Sanitary Services	16.0	21.0	22.5	31.2	7.1
Electric, gas & steam	12.1	16.0	16.8	32.2	5.0
Water & irrigation	2.4	3.8	4.4	58.3	15.8
Sanitary services	1.5	1.2	1.3	- 20.0	7.7
Wholesale & Retail Trade	246.6	304.0	327.6	23.3	7.8
Wholesale Trade	61.4	81.5	90.8	32.7	11.4
Motor vehicles & equipment	6.8	10.0	11.6	47.1	16.0
Drugs & chemicals	4.1	5.4	6.2	31.7	14.8
Dry goods & apparel	2.2	3.5	4.5	59.1	28.6
Groceries & related	10.4	13.1	12.6	26.0	- 3.8
Electrical goods, plumbing & heating supp.	7.2	10.9	13.0	51.4	19.3
Machinery & equipment	10.2	14.9	17.3	46.1	16.1
Farm produce & miscellaneous	20.5	23.7	25.6	15.6	8.0
Retail Trade	185.2	222.5	236.8	20.4	6.4
Building materials, hardware & farm	13.0	12.9	12.8	- .8	- .9
General merchandising	31.6	42.2	44.4	33.5	5.2
Limited price stores	6.1	5.3	5.8	- 13.1	9.4
Other general merchandise	25.5	36.9	38.6	44.7	4.6
Food & drug stores	36.0	39.9	41.8	10.8	4.8
Automobile dealers & gas stations	33.1	38.9	42.9	17.5	10.3
Automobile dealers	18.7	22.7	26.8	21.4	18.1
Gas stations	14.4	16.2	16.1	12.5	- .6
Apparel & accessories	10.5	12.5	13.5	19.0	8.0
Furniture, Furnishing & Appliances	10.4	10.8	10.8	3.8	0
Eating & Drinking Places	28.3	38.4	41.5	35.7	8.1
Miscellaneous Retail Stores	22.3	26.9	29.1	20.6	8.2

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TENNESSEE EMPLOYMENT PROJECTION BY INDUSTRY TO 1975

Industry Title	Employment (000's) 1960	1969	1975	Percent Change 1960-1969	Percent Change 1969-1975
Drug stores	9.4	10.9	12.6	16.0	15.6
Other retail stores	12.9	16.0	16.5	24.0	3.1
Finance, Insurance & Real Estate	45.7	61.9	70.1	35.4	13.2
Finance	17.3	27.9	33.1	61.3	18.6
Banks & credit agencies	16.3	24.7	29.9	51.5	21.1
Stock brokers & investment co.	1.0	3.2	3.2	220.0	0
Insurance	22.4	26.7	28.3	19.2	6.0
Real Estates	6.0	7.3	8.7	21.7	19.2
Services	291.9	378.1	433.8	29.5	14.7
Private Household	69.1	64.0	62.9	- 7.4	- 1.8
Services, Exc. Private Household	222.8	314.1	370.9	41.0	18.1
Hotels & Other Lodging Places	10.1	16.0	19.4	58.4	17.5
Personal Services	31.2	32.9	35.2	5.4	7.0
Laundry, cleaning & valet services	16.7	16.0	16.6	- 4.2	3.8
All other personal services	14.5	16.9	18.6	16.6	10.1
Miscellaneous Business Services	12.8	22.4	29.8	75.0	33.0
Advertising	1.5	1.8	1.9	20.0	5.6
Other miscellaneous business services	11.3	20.6	27.9	82.3	35.4
Automobile Repair Services & Garage	8.7	10.2	11.5	17.2	12.7
Miscellaneous Repair Services	5.6	6.0	6.2	7.1	3.3
Entertainment & Recreation	7.6	8.5	11.4	11.8	34.1
Motion pictures & theatres	3.4	3.4	4.2	0	23.5
Miscellaneous entertainment & recreation	4.2	5.1	7.2	21.4	41.2
Medical & Other Health Services	45.7	66.8	77.6	46.2	16.2
Hospitals	17.8	25.3	33.5	42.1	32.4
Other medical & health services	27.9	41.5	44.1	48.7	6.3
Legal Services	2.9	3.5	4.2	20.7	20.0
Educational Services	65.8	106.3	130.7	61.6	23.0
Non Profit Membership Organizations	26.1	32.4	33.6	24.1	3.7
Welfare & religious	13.6	14.7	15.6	8.1	6.1
Other non profit	12.5	17.7	18.0	41.6	1.7
Miscellaneous Services	6.3	9.1	11.3	44.4	24.2
Engineering & architectural	3.7	5.3	6.4	43.2	20.8
Accounting & bookkeeping	1.6	3.6	4.6	125.0	27.8
All other professional services	1.0	.2	.3	- 80.0	50.0
Public Administration	45.7	60.3	66.4	31.9	10.1
Postal Services	9.7	11.4	13.2	17.5	15.8
Other Federal Public Administration	15.9	21.6	23.6	35.8	9.3
State Government	6.0	9.0	10.6	50.0	17.8
Local Government	14.1	18.3	19.0	29.8	3.8

APPENDIX B

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EMPLOYMENT BY OCCUPATION IN TENNESSEE
1960, 1969 AND PROJECTED TO 1975

PROJECTED EXPANSION NEEDS, REPLACEMENT NEEDS,
AND TOTAL OPENINGS--1969-1975

Occupation	Employment			1969 - 1975		
	1960	1969	1975	Expansion Needs	Replacement Needs	Total Openings
TOTAL	1,319,370	1,608,140	1,745,766	137,625	275,544	413,169
Professional, Technical, Kindred	122,290	180,273	213,247	32,974	27,366	60,340
Engineers, technical	11,435	19,996	24,185	4,189	1,710	5,899
Engineers, aeronautical	198	822	1,010	188	42	230
Engineers, chemical	1,162	1,735	1,805	70	96	166
Engineers, civil	2,925	4,070	4,675	605	498	1,103
Engineers, electrical	2,104	3,970	4,665	695	258	953
Engineers, industrial	1,330	2,563	3,320	757	192	949
Engineers, mechanical	1,873	3,550	4,115	565	324	889
Engineers, metallurgical	292	504	1,035	531	54	585
Engineers, mining	57	100	180	80	12	92
Other engineers, technical	1,494	2,682	3,380	698	234	932
Medical, & other health workers	22,380	28,139	32,470	4,331	7,122	11,453
Dentists	1,330	1,295	1,315	20	198	218
Dietitians & nutritionists	662	820	925	105	252	357
Nurses, professional	9,378	11,705	13,650	1,945	3,654	5,599
Optometrists	273	254	255	1	36	37
Osteopaths	32	30	30	0	6	6
Pharmacists	1,846	2,228	2,425	197	390	587
Physicians & surgeons	4,218	4,538	5,025	487	720	1,207
Psychologists	82	144	205	61	36	97
Technicians, medical & dental	2,680	4,650	5,990	1,340	1,182	2,522
Veterinarians	185	230	210	-20	24	4
Other medical & health workers	1,694	2,245	2,440	195	624	819
Teachers	39,050	56,957	61,605	4,648	7,290	11,938
Teachers, elementary	22,894	28,137	29,310	1,173	1,746	2,919
Teachers, secondary	10,210	16,415	17,610	1,195	3,306	4,501
Teachers, college	3,318	8,480	9,865	1,385	1,284	2,669
Teachers, other	2,628	3,925	4,820	895	954	1,849
Natural scientists	3,350	5,498	6,455	957	372	1,329
Chemists	1,832	2,954	3,365	411	210	621
Agricultural scientists	533	693	720	37	66	103
Biological scientists	348	540	685	145	36	181
Geologists & geophysicists	105	187	230	43	12	55
Mathematicians	142	414	540	126	12	138
Physicists	332	650	830	180	30	210
Other natural scientists	58	70	85	15	6	21
Social Scientists	450	654	795	141	72	213
Economists	138	222	270	48	24	72
Statisticians & actuaries	285	392	470	78	42	120
Other social scientists	27	40	55	15	6	21
Technicians, exc. medical & dental	8,915	14,128	17,055	2,927	942	3,869
Draftsmen	2,073	3,638	4,340	702	192	894
Surveyors	1,038	1,350	1,545	195	102	297
Air traffic controllers	215	398	470	72	18	90
Radio operators	325	434	500	66	18	84
Technicians, other	5,264	8,308	10,200	1,892	612	2,504
Other prof., tech. & kindred workers	36,710	54,901	70,682	15,781	9,858	25,639
Accountants & auditors	5,833	7,575	8,290	715	1,128	1,843
Airplane pilots & navigators	328	735	1,025	290	66	356
Architects	388	470	560	90	72	162
Clergymen	5,380	3,257	3,370	113	516	629
Designers, exc. design draftsmen	504	840	1,050	210	84	294
Editors & reporters	1,433	1,843	2,035	192	450	642
Lawyers & judges	3,310	3,996	4,440	444	732	1,176
Librarians	1,550	2,300	2,805	505	744	1,249
Personnel & labor relations workers	1,590	2,820	4,075	1,255	270	1,525
Photographers	897	1,215	1,285	70	156	226

EMPLOYMENT BY OCCUPATION IN TENNESSEE
1960, 1969 AND PROJECTED TO 1975

PROJECTED EXPANSION NEEDS, REPLACEMENT NEEDS,
AND TOTAL OPENINGS-1969-1975

Occupation	Employment			1969 - 1975		
	1960	1969	1975	Expansion Needs	Replacement Needs	Total Openings
Social & welfare workers	1,550	2,070	2,480	410	534	944
Workers in arts, entertainment	6,392	9,950	11,480	1,530	2,010	3,540
Professional, technical, kindred nec	7,555	17,830	27,787	9,957	3,096	13,053
Managers, officials, proprietors	97,200	118,116	128,147	10,031	15,570	25,601
Conductors, railroads	658	676	770	94	162	256
Officers, pilots, engineers ship	438	536	593	57	72	129
Creditmen	873	1,197	1,581	384	132	516
Purchasing agents	1,455	2,381	2,583	202	270	472
Postmasters & assistants	798	676	710	34	156	190
Managers, officials, propietors nec	92,978	112,650	121,910	9,260	14,778	24,038
Clerical & kindred workers	152,850	224,428	254,362	29,934	55,860	85,794
Stenographers, typists, sec.	35,450	54,776	60,885	6,109	17,694	23,803
Office machine operators	3,620	5,826	7,561	1,735	1,602	3,337
Other clerical & kindred workers	113,780	163,826	185,916	22,090	36,564	58,654
Accounting clerks	6,324	8,377	9,010	633	2,268	2,901
Bookkeepers, hand	11,093	14,616	15,671	1,055	3,732	4,787
Bank tellers	1,963	3,533	4,875	1,342	966	2,308
Cashiers	9,696	17,003	19,914	2,911	4,152	7,063
Mail carriers	3,584	4,161	4,940	779	438	1,217
Postal clerks	2,894	3,360	4,013	653	426	1,079
Shipping & receiving clerks	5,727	7,746	8,626	880	732	1,612
Telephone operators	5,424	6,390	6,776	386	1,974	2,360
Clerical & kindred, n.e.c.	67,075	98,640	112,091	13,451	21,876	35,327
Sales Workers	91,590	107,614	119,662	12,048	25,800	37,848
Craftsmen, foremen & kindred	164,510	225,339	251,961	26,622	26,394	53,016
Construction craftsmen	55,668	67,513	77,731	10,218	8,550	18,768
Carpenters	21,724	24,323	27,913	3,590	3,606	7,196
Brickmasons, stone, tile setters	4,712	5,766	6,587	821	558	1,379
Cement & concrete finishers	1,017	1,649	1,938	289	162	451
Electricians	6,492	9,291	10,879	1,588	966	2,554
Excavating, grading mach. oprs.	5,092	7,137	8,272	1,135	600	1,735
Painters & paperhangers	8,808	9,067	10,294	1,227	1,452	2,679
Plasterers	532	408	439	31	42	73
Plumbers & pipefitters	5,498	7,231	8,428	1,197	846	2,043
Roofers & slaters	955	1,306	1,462	156	156	312
Structural metalworkers	838	1,335	1,519	184	162	346
Foremen, n.e.c.	21,592	33,976	37,433	3,457	4,068	7,525
Metalworking, craftsmen, exc. mech.	14,285	23,169	25,679	2,510	2,814	5,324
Machinists & related occup.	7,642	13,469	14,796	1,327	1,698	3,025
Blacksmiths, forgemen, hammermen	527	516	563	47	108	155
Boilermakers	680	841	886	45	108	153
Heat treaters, annealers, temprs.	82	144	164	20	18	38
Millwrights	1,192	1,656	1,795	139	198	337
Molders, metal (exc. coremakers)	962	1,574	1,861	287	162	449
Pattern makers, metal & wood	212	358	441	83	48	131
Rollers & roll hands	325	434	476	42	48	90
Sheetmetal workers	1,900	2,817	3,095	278	264	542
Toolmakers, diemakers, setters	763	1,360	1,602	242	162	404
Mechanics & Repairmen	41,478	62,457	69,791	7,334	6,882	14,216
Airplane mechanics & repairmen	520	923	1,138	215	60	275
Motor vehicle mechanics	14,270	17,534	20,049	2,515	1,464	3,979
Office machine mechanics	458	708	928	220	42	262
Radio & T.V. mechanics	2,006	2,508	2,767	259	144	403
Railroad & car shop mechanics	710	708	766	58	120	178
Other mechanics & repairmen	23,514	40,076	44,143	4,067	5,052	9,119
Printing Trades Craftsmen	4,888	6,003	6,335	332	648	980
Compositors & typesetters	2,935	3,369	3,394	25	384	409
Electrotypers & stereotypers	185	121	111	-10	12	2
Engravers exc. photoengravers	115	177	203	26	30	56

EMPLOYMENT BY OCCUPATION IN TENNESSEE
1960, 1969 AND PROJECTED TO 1975

PROJECTED EXPANSION NEEDS, REPLACEMENT NEEDS,
AND TOTAL OPENINGS--1969-1975

Occupation	Employment			1969 - 1975		
	1960	1969	1975	Expansion Needs	Replacement Needs	Total Openings
Photoengravers, lithographers	238	404	511	107	42	149
Pressmen & plate printers	1,415	1,932	2,116	184	180	364
Transportation & Pub. Util. crftsm.	6,857	8,386	9,355	969	714	1,683
Linemen & servicemen	5,025	6,967	7,792	825	396	1,221
Locomotive engineers	994	1,031	1,168	137	288	425
Locomotive firemen	838	388	395	7	30	37
Other craftsmen & kindred	19,742	23,835	25,637	1,802	2,718	4,520
Bakers	1,150	1,304	1,474	170	216	386
Cabinetmakers	1,360	1,731	1,944	213	288	501
Cranemen, derrickmen, hoistmen	1,926	2,762	3,245	483	306	789
Glaziers	200	294	358	64	24	88
Jewelers & watchmakers	672	705	727	22	114	136
Loomfixers	347	369	333	-36	36	0
Opticians, lens grinders, polishers	183	241	269	28	42	70
Inspectors, log & lumber	788	837	872	35	108	143
Inspectors, other	1,823	1,987	1,825	-162	276	114
Upholsterers	2,390	2,956	3,303	347	318	665
Craftsmen, kindred, n.e.c.	8,903	10,649	11,287	638	990	1,628
Operatives & kindred workers	275,870	381,927	411,520	29,593	55,506	85,099
Drivers & deliverymen	55,010	62,705	68,480	5,775	4,848	10,623
Drivers, bus, truck, tractor	44,326	50,353	54,808	4,455	3,756	8,211
Deliverymen, routemen, cab drvrs.	10,684	12,352	13,672	1,320	1,092	2,412
Semiskilled metalworking occup.	15,330	32,607	36,144	3,537	3,864	7,401
Assemblers, metalworking class A.	748	1,834	2,107	273	252	525
Assemblers, metalworking class B.	3,500	7,985	8,798	813	1,080	1,893
Inspectors, metalworking class B.	1,354	2,991	3,213	222	576	798
Machine tool operators, class B	1,956	4,229	4,511	282	618	900
Electroplaters	265	664	636	-28	90	62
Electroplater helpers	400	855	850	-5	120	115
Furnacement, smeltermen, pourers.	942	1,562	1,790	228	162	390
Heaters, metal	30	51	64	13	6	19
Welders & flame cutters	6,135	12,436	14,175	1,739	960	2,699
Transp. & pub. util. oper.	3,570	3,850	4,290	440	444	884
Brakemen, switchmen, railroad	2,355	2,259	2,519	260	258	518
Power station operators	898	1,198	1,334	136	150	286
Sailors & deckhands	317	393	437	44	36	80
Semiskilled textile occupations	28,075	43,468	49,022	5,554	11,382	16,936
Knitters, loopers & toppers	4,718	5,629	5,261	-368	1,218	850
Spinners, textile	1,395	1,607	1,394	-213	258	45
Weavers, textile	927	1,011	882	-129	144	15
Sewers & stitchers mfg.	21,035	35,221	41,485	6,264	9,762	16,026
Other operatives & kindred	173,885	239,297	253,584	14,287	34,968	84,169
Asbestos, insulation workers	412	616	714	98	54	35,066
Auto attendants, gas & parking	9,252	10,221	10,449	228	618	846
Blasters & powdermen	72	85	106	21	6	27
Laundry & dry cleanings oprs.	9,662	8,978	9,280	302	2,112	2,414
Mine operatives, laborers, n.e.c.	5,320	4,009	3,851	-158	474	316
Meat cutters, exc. meat packing	2,780	2,867	2,904	37	240	277
Operatives & kindred n.e.c.	146,387	212,521	226,280	13,759	31,464	45,223
Service Workers	158,270	184,508	204,670	20,162	50,328	70,490
Private household workers	53,980	49,942	50,123	181	17,112	17,293
Protective service workers	11,278	12,786	13,617	831	2,262	3,093
Firemen	2,140	2,091	2,281	190	342	532
Policemen, detectives, etc.	4,112	5,087	5,562	475	450	925
Guards, watchmen, doorkeepers	5,026	5,608	5,774	166	1,470	1,636
Food service workers	31,585	42,437	47,862	5,425	10,776	16,201
Bartenders	248	3,500	3,900	400	666	1,066
Cooks, exc. private households	13,220	16,650	18,925	2,275	4,266	6,541
Counter & fountain workers	2,434	3,463	4,257	794	924	1,718

EMPLOYMENT BY OCCUPATION IN TENNESSEE
1960, 1969 AND PROJECTED TO 1975

PROJECTED EXPANSION NEEDS, REPLACEMENT NEEDS,
AND TOTAL OPENINGS--1969-1975

Occupation	Employment			1969-1975		
	1960	1969	1975	Expansion Needs	Replacement Needs	Total Openings
Waiter & waitresses	15,693	18,824	20,780	1,956	4,920	6,876
Other service workers	61,427	79,343	93,068	13,725	20,214	33,939
Airline stewards, stewardesses	266	802	1,085	283	258	541
Attendants, hospital & other	7,207	12,910	17,781	4,871	3,348	8,219
Charwomen & cleaners	2,162	2,812	3,395	583	756	1,339
Janitors & sextons	11,060	13,339	15,329	1,990	3,438	5,428
Nurses, practical	4,776	6,918	8,437	1,519	2,538	4,057
Other service workers, n.e.c.	35,956	42,562	47,041	4,479	9,876	14,355
Laborers exc. Farm and Mine	71,840	80,321	78,472	-1,849	8,100	6,251
Farmers and Farm Workers	184,950	105,615	83,725	-21,890	10,620	-11,270

VT 017 638

SIKES, PATRICIA

INNOVATIONS IN REPORTING AND EVALUATING HOME PROJECTS.

OKLAHOMA STATE DEPT. OF VOCATIONAL AND TECHNICAL EDUCATION, STILLWATER.;
MF AVAILABLE IN VT-ERIC SET.
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DESCRIPTORS - SECONDARY GRADES; TABLES (DATA); TEACHING TECHNIQUES; *AUDIOVISUAL AIDS; *PROGRAM EVALUATION; STUDENT PROJECTS; *FIELD EXPERIENCE PROGRAMS; *EDUCATIONAL INNOVATION; PROGRAM EFFECTIVENESS; *INSTRUCTIONAL IMPROVEMENT; PARTICIPANT INVOLVEMENT; VOCATIONAL DEVELOPMENT; VOCATIONAL EDUCATION

ABSTRACT - WRITTEN BY A VOCATIONAL HOME ECONOMICS INSTRUCTOR AT THE HIGH SCHOOL LEVEL, THE PURPOSE OF THIS STUDY WAS TO DEVELOP A METHOD OF REPORTING AND EVALUATING HOME PROJECTS WHICH WOULD INTEREST STUDENTS, IMPROVE THEIR WORK, AND ALLOW FOR GREATER TEACHER INVOLVEMENT WITH THE STUDENTS THAN HAD WRITTEN REPORTS. THE PROBLEMS ENCOUNTERED BY USING AUDIOVISUAL EQUIPMENT AS THE TEACHING METHOD ARE DISCUSSED. A CONTROL GROUP AND THREE EXPERIMENTAL GROUPS, INCLUDING BOTH STUDENTS WHO WERE EXPERIENCED AND THOSE INEXPERIENCED WITH THE AUDIOVISUAL EQUIPMENT, WERE STUDIED IN ORDER TO ANSWER THREE QUESTIONS: (1) WILL MORE STUDENTS COMPLETE HOME PROJECTS AS A RESULT OF THIS REPORTING METHOD, (2) WILL MORE STUDENTS COMPLETE REPORTING REQUIREMENTS ON TIME, AND (3) WILL GRADE AVERAGES FOR THE EXPERIMENTAL GROUPS BE HIGHER THAN FOR THE CONTROL GROUP? A CHI-SQUARE ANALYSIS OF THE DATA REVEALED THERE WAS A SIGNIFICANT DIFFERENCE AMONG THE GROUPS, WHICH DEMONSTRATED THE EFFECTIVENESS OF THIS INNOVATIVE INSTRUCTIONAL METHOD IN ACHIEVING ITS GOALS. A SERIES OF RECOMMENDATIONS AND A DESCRIPTION OF THE PROJECT DESIGN ARE INCLUDED. VARIOUS TABLES PRESENT THE DATA. (AG)

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INNOVATIONS IN REPORTING AND EVALUATING HOME PROJECTS

By

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INNOVATIONS IN REPORTING AND EVALUATING HOME PROJECTS

Purpose and Objectives of Program

The purpose of the research was to develop a method of reporting home projects which would interest and stimulate students and which would involve the teachers with the students to a greater degree than had written reports. It was hoped that more students would complete home projects, get them in on time, and show an improvement in the quality of their work.

Introduction

The method chosen for the reporting of home projects involved the use of audiovisual equipment. During the activity stage of the student's home project, the student could borrow a camera and film to make color slides of her work. For example--students redecorating furniture or a room would take before and after pictures. These pictures were used to let the teacher share with the student in her achievement and for teacher's use in the evaluation of the home project. They were also used to encourage and inspire other students. As each student completed the actual work she had contracted to do for her home project, she checked out her tape and a tape recorder and recorded the report of her home project, her evaluation of it, and a discussion of the learning experiences she had encountered. The teacher listened to each tape and responded to the individual on her tape. Each tape was then returned to the student so that she might hear the teacher's evaluation.

As the research was carried on from semester to semester, there were several difficulties which arose. For example, during the first semester, some students expressed the feeling that they were embarrassed by talking to the tape recorder. In an attempt to help students in overcoming this feeling, the instructor made a tape telling the purposes of home projects and outlining the steps for completing a home project. At the beginning of the second semester, a communications center was set up in the room. In this area

the student could listen to the tape, look at color slides of completed home projects, and pick up printed materials concerning home projects. The students expressed positive feelings concerning this method of introduction to home projects. However, at the end of the semester, 19 students had not completed home projects. (The teacher went back to the oral classroom presentation of home projects the following semester.) Another possible factor which may have contributed to the poor results for that particular semester was that the due date for taped reports and evaluations was the last school day before Christmas vacation.

Another attempt at helping students overcome shyness in connection with the use of the tape recorder was the making of individual tapes to the students concerning the evaluation of their garments constructed in class. These were received enthusiastically by the students. However, it is not known to what extent, if any, that these tapes contributed to positive returns in home project reports.

Another difficulty encountered was the dysfunction of the tape recording machines. It was learned that the recording heads should be cleaned once per semester in order to be maintained.

The first tapes purchased also presented difficulties. The faulty tapes were returned to the place of purchase and were redeemed. Additional tapes, of a better quality, were purchased to substitute for any of the others which might become faulty and to be given to new students who had not been assigned a tape in preceding semesters.

A difficulty which was encountered during the time of the research but which has not been sufficiently corrected was that too many students put off making their tape recordings until near the date they were due. Then there were not enough machines to supply the demand. One plan to off-set this was to have a center set up in the department so that students could come in to tape during a study period or before or after school. Perhaps a better solution would have been to have had a different due date for each of the five classes with a period of one week between these dates. Such a plan would also afford the instructor an opportunity to make immediate responses to all students. Immediate response was not possible when 50 to 60 tapes were turned in during one week.

Methodology

The research design was originally developed to include a control group and two experimental groups. Two experimental groups were necessary in order to test the effect of experience in reporting by tape. Because of obvious problems with equipment, a third experimental group was added after the project was initiated. Table I indicates the student samples in the project.

TABLE I

STUDENT ENROLLMENTS

	Control 1st Semester 1970-1971	Experimental 2nd Semester 1970-1971	Experimental 1st Semester 1971-1972	Experimental 2nd Semester 1971-1972
Home Economics II Inexperienced	45	46	49	3
Home Economics II Experienced	--	--	--	41
Home Economics III Inexperienced	28	29	9	8
Home Economics III Experienced	--	--	27	25
Total Students	73	75	85	77

Three basic research questions were studied:

1. Will more students complete home projects as a result of the new reporting method?
2. Will more students complete reporting requirements on time?
3. Will grade averages for the experimental groups be higher than for the control group?

In addition, comparisons were made to see if class level or experience in using the new reporting method would have effect on its usefulness. An alpha level of .05 was selected as the criterion for significant differences.

Results of Analysis

Data were collected regarding the number of students who completed reports on home projects. A Chi-Square analysis tested the hypothesis that the control group and three experimental groups were from the same population (See Table II). The results of the analysis indicated there was a significant difference among the groups.

TABLE II

CHI-SQUARE ANALYSIS OF STUDENTS REPORTING HOME PROJECTS

	Control	E_1	E_2	E_3	Result
Reported Project	57	70	67	66	$x^2 = 8.57$
Didn't Report Project	16	5	18	11	$p < .05$

E_1, E_2, and E_3 signify respectively the experimental classes taught the three experimental semesters.

When the control group was compared separately with each of the experimental groups, as indicated in Table III, only the first experimental group taught during the second semester, 1970-1971, showed significant gain in reporting home projects.

TABLE III

TWO BY TWO CHI-SQUARE RESULTS OF STUDENTS REPORTING HOME PROJECTS

Comparison	x^2 Value	Probability
Control vs. E_1	5.87	$p < .02$
Control vs. E_2	.01	$p > .99$
Control vs. E_3	1.01	$p > .50$

Accurate records were kept by the investigator regarding reports that were turned in after the due date. An analysis of the four groups regarding reporting home projects on time discloses a difference among the groups significant at the .05 level (See Table IV).

Control students were compared with each of the experimental groups to find precisely where differences existed in regard to reporting home projects on time. As was true in regard to reporting projects, the only significant difference in reporting on time was between the control group and the first experimental group. As observed in Table V, the first experimental group had a greater number of students reporting on time.

TABLE IV

CHI-SQUARE ANALYSIS OF STUDENTS REPORTING HOME PROJECTS ON TIME

	Control	E_1	E_2	E_3	Result
Reported on Time	38	61	52	47	$x^2 = 8.45$
Reported Late	19	9	15	19	$p < .05$

TABLE V

TWO BY TWO CHI-SQUARE RESULTS OF STUDENTS REPORTING HOME PROJECTS ON TIME

Comparison	x^2 Value	Probability
Control vs. E_1	6.52	$p < .02$
Control vs. E_2	1.34	$p > .50$
Control vs. E_3	.12	$p > .90$

Students experienced in reporting by tape and slide were compared with inexperienced students in terms of numbers who completed reports on home projects. Table VI indicates no significant difference between experienced and inexperienced students with regard to reporting home projects on tape and slides.

TABLE VI

CHI-SQUARE ANALYSIS OF STUDENTS' EXPERIENCE IN REPORTING HOME PROJECTS

	Experienced	Inexperienced	Results
Reported Projects	80	123	$x^2 = .004$
Didn't Report Projects	13	21	$p > .99$

Students in Home Economics II classes were compared with students in Home Economics III classes to ascertain differences in completing reports on home projects by

tape and slide. Table VII indicates that there was no significant difference between Home Economics II and Home Economics III students with regard to completing home project reports on tape and slide.

TABLE VII

CHI-SQUARE ANALYSIS OF STUDENTS REPORTING HOME PROJECTS BY CLASS LEVEL

	Home Economics II	Home Economics III	Results
Reported Home Projects	114	89	$x^2 = 2.94$
Didn't Report	25	9	$p > .50$

The third basic question with which this project was concerned relates to the effects of reporting by tape and slide on the students' class grades. An analysis was made of the control group and three experimental groups to see if there were differences among the groups with regard to grades. The analysis (Table VII) discloses that there was a significant difference among the groups with respect to grades attained.

TABLE VIII

CHI-SQUARE ANALYSIS OF STUDENTS' GRADES IN HOME ECONOMICS CLASSES

	GRADES				
Class	A	B	C & D	F	Results
Control	18	18	21	16	
E_1	35	25	10	5	
E_2	29	18	20	18	$x^2 = 19.26$
E_3	31	19	16	11	$p < .05$

When the control group was compared with each of the experimental groups, a significant difference was disclosed between the control group and the first experimental group. The first experimental group attained higher grades as a group than did the control group.

Summary of Statistical Results

The first experimental group which made tape and slide reports of home projects during the second semester of the 1970-1971 school year was significantly better than the control group in terms of all three variables of the study--more students reported their home projects, more students reported on time, and they attained better grades in Home Economics as a group. Although neither the second or third experimental groups were significantly better than the control group, the differences were in favor of the experimental groups in every case. Because of the phenomenon of the experimental group being better in every case (although not significantly better), it was concluded that the experimental method does increase the number of students reporting, the number reporting on time, and students attain higher grades. Neither class level or experience with the reporting method has any effect on the number of students who complete home project reports.

Unmeasured results the instructor considers of importance include the rapport and improvement of communications that developed between student and teacher. The one-to-one relationship, the oral communications, and the immediate feed-back to the student built up the student's confidence in the teacher. It also served as a personal media for reinforcement of good work accomplished by the student.

Materials (color slides and taped reports) are available to help in-coming students to understand about home projects and to get some ideas of things they might do for home projects.

Since the cameras, projector, tape recorders, and tapes were available, they were used in many ways to aid the students and the home economics program. Lessons and interviews were taped for future use. Slides were made which illustrated home projects, the work being done in home economics classes, and the activities of the Future Homemakers of America. These slides helped in maintaining and developing good feelings toward home economics and toward the FHA. The students were shown pictures that

they were in on several occasions. These color slides were also shown to eighth grade students, guests at the FHA party, and to parents who attended the FHA Banquet in the spring. The slides will also be shown to parents who come to PTA Open House. Another way in which the equipment was useful was in preparing evaluations concerning clothing construction. The teacher taped an evaluation for each student as she examined the garments which had been constructed in class. This enabled the teacher to make more detailed constructive criticism than she could have made in written form. Also, it is believed that the reinforcement and praise were more meaningful.

According to empirical evidence, students who had produced quality written home projects continued to perform at a high level when reporting home projects on tape.

In several instances, students who had failed to complete home projects when written reports were required, turned in good reports using the taping method. However, it was noted that in several of these instances the poor students returned to their low level of achievement after using the taping method successfully for two semesters. This suggests that the novelty of a new method of reporting is a stimulus for some students.

In several cases, students who had previously shown difficulty in expressing themselves in writing showed improvement when reporting orally. An example was a student with learning disabilities who consistently achieved at a high level when reporting by tape as compared to low achievement on written class work.

Recommendations

It is recommended that in a continuation or adaptation of this study, the following suggestions be taken into consideration:

1. That there be at least three tape recorders available in the department, library, or other center in the school. (It is suggested that many students will own a tape recorder they may use in making their own reports.)
2. That each student be given or purchase one 60-minute tape to be used by the teacher and the student during the year.
3. That the tape recording machines be cleaned once per semester.
4. That the due dates for reports be scheduled to avoid any two classes having a due date within the same week.

5. That the teacher give immediate feedback to the students by taping a response to the project report within one week after it is submitted.
6. That a communications center be set up so that students can make tapes, listen to their tapes, look at their own color slides, and see slides that show suggested home projects.
7. That some printed material be prepared to guide students in carrying out home projects and in reporting and evaluating them.
8. That students be given the option of preparing a written or a taped home project report and evaluation.
9. That the teacher respond on tape to all students.
10. That further research be undertaken to determine if alternating methods of reporting home projects would have effect on achievement in the class.

APPENDIX

PROPOSAL FOR PROGRAMS OR PROJECTS

SUBMITTED TO THE OKLAHOMA STATE BOARD FOR
VOCATIONAL-TECHNICAL EDUCATION

FOR SUPPORT UNDER THE VOCATIONAL EDUCATION AMENDMENTS OF 1968

Title: Innovations in Reporting and Evaluating Home Projects

Applicant Organization: C. E. Donart Senior High School, Stillwater, Oklahoma

Program Director: Patricia J. Sikes, Home Economics Teacher
C. E. Donart High School, Stillwater 372-4894

Transmitted By: Wesley Beck, Jr.
Assistant Superintendent, Stillwater

Duration of Activity: April 15, 1971, to April 15, 1972

Total State Funds Requested: $605.00

Date Transmitted: April 6, 1971

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INNOVATIONS IN REPORTING AND EVALUATING HOME PROJECTS

Statement of Purpose and Objectives of Program

Home projects are important parts of the total learning experiences of vocational home economics students. However, every semester there are students who turn in late home projects, do poor work on their projects, and there are some who never turn them in. Several techniques for attempting to interest these students and for trying to help them to carry through to the finish have been attempted. Home projects have been made a class requirement in order for these students to pass for the semester. However, none of the attempts have been proven successful.

The purpose for this proposal is to try a new and hopefully more innovative method of introducing students to home projects and a method which will involve them more in their home projects, as well as involve the teacher more personally with them. Also, it will involve other students with them and their accomplishments.

Procedures and Personnel Involved

The way in which objectives will be carried out is through the use of several audiovisual techniques. First, instamatic cameras will be secured and will be available for students to check out and use for taking pictures of their projects during the time they are working on them as well as of the completed projects. Some of the pictures will be colored prints and others will be colored slides. The colored pictures will be included in the folders of illustrative materials turned in by the students for evaluation purposes. These pictures will be used in a number of ways, such as on bulletin boards, innovative presentations for giving other students ideas for home projects, and to help the slow students to have better understanding. The colored slides will be used in such presentations for a "show and tell" session when home projects are completed and in a learning center which will be set up for students to go so they may use the materials individually.

The second part of the procedure will be for each student to have one side of a thirty-minute tape on which she will "tell" about the home project she has just completed and evaluate it. Each student will be expected to use only about fifteen minutes of her

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tape talking about her project. The remainder of the tape will be used by the instructor's response to the student. For this part of the innovation, cassette tape recorders, ear phones, and about forty thirty-minute tapes will be needed.

The main purpose of the tapes will be for the student to report her home project for evaluation purposes and for the student to have the teacher personally respond to her on tape. Some of the better tapes will be placed in the audiovisual corner also.

There have been students who have used pictures and tape recordings in doing home projects in the past. However, this has been limited to those who could "afford" to do so. It is hoped that this method of reporting and evaluating can be shared by all. Furthermore, it is hoped that the slow and poor students will, in an indirect manner, learn how they might do better work on their home projects and get new ideas for projects they might carry out. Of great importance is the possibility of assisting students in "wanting" to carry through to the completion of projects.

To evaluate this project properly, it should carry through for a three-semester period. First semester of this school year, the students in the classes kept a daily diary while doing their home projects, and when the work was done, each wrote a report and evaluated their projects. A record of these projects has been compiled including the subject or area of work in which the project was done, the grade the student received, if the report was handed in on time or late, and a list of students who did not turn in reports of completed projects. The taped method proposed in this paper for reporting and evaluating home projects will be used this semester and the findings will be compared.

Also, there will be a "show and tell" period at the end of the semester. Selected pictures and tapes will be saved to be used to introduce the next year's students to this method of doing home projects and to give them ideas relating to home projects.

The instructor teaches Home Economics II and III classes. Therefore, the students who are new to the classes next year will have had experience with written reports and evaluations. This group, as well as the students enrolled in Home Economics II and III this year, will be asked to evaluate and compare the two methods. Another method for evaluating next year will be to compare percentages of those completing satisfactory home projects and handing them in on time with the records from this year.

The students, their families, and the instructor will be the only ones involved in this activity, with the exception of having the film developed. This will be done commercially.

Research Design

Table I indicates the approximate enrollments of students in the Home Economics classes during the course of the project.

TABLE I

STUDENT ENROLLMENTS

Class	Control 1st Semester 1970-1971	Experimental Group I 2nd Semester 1970-1971	Experimental Group II 1st Semester 1971-1972
Home Economics II	50	50	60
Home Economics III	30	30	40*

*Approximately 30 of these students will have had experience in the experimental method as Home Economics II students.

Research questions of the study are:

1. Will more students complete home projects as a result of the new reporting method?
2. Will more students complete reporting requirements on time?
3. Will grade averages for the experimental groups be higher than for the control group?

In order to answer these major questions, appropriate statistical comparisons will be made between the control group and the two experimental groups. In addition, comparisons will be made between class levels to see if the level of instruction is related to the method of reporting. The approximately 30 students in Home Economics III, Experimental Group II, who are using the method for the second time will be compared with the control group and those using the experimental method for the first time to see if experience is a factor in the successful use of this method of reporting.

The investigator will make a descriptive case study report of selected students from various socioeconomic levels. The case studies, along with evaluative responses toward the experimental method of reporting, will also be analyzed as an input to the evaluation of the project.

Number to Be Served and Duration of Program

There are approximately 75 students in my home economics classes this year. These students would be served by this project this year. I would like to carry this project through the next year also. Thus, a similar number would be served. This project would extend over a three-semester period, 1971-1972.

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BUDGET

Item	Cost
2 instamatic cameras	$100.00
3 cassette tape recorders	150.00
1 carrousel slide projector	125.00
1 set ear phones	25.00
1 slide viewer	15.00
40 30-minute tapes	25.00
25 rolls color film	40.00
150 flash cubes	55.00
Film processing	50.00
Repairs on equipment (if needed)	20.00
TOTAL	$605.00

VT 017 652
BALDREE, EDITH
A FOLLOW-UP STUDY OF THE 1969 AND 1970 BUSINESS MAJORS OF BRADLEY CENTRAL HIGH SCHOOL, CLEVELAND, TENNESSEE. A MINI-GRANT PROJECT PRESENTED TO THE TENNESSEE RESEARCH COORDINATING UNIT--1971-1972.

TENNESSEE OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, KNOXVILLE. TENNESSEE UNIV., KNOXVILLE. COLL. OF EDUCATION;TENNESSEE STATE DEPT. OF EDUCATION, NASHVILLE. DIV. OF VOCATIONAL-TECHNICAL EDUCATION.
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PUB DATE - APR72 24P.

DESCRIPTORS - *FOLLOWUP STUDIES; *BUSINESS EDUCATION; *GRADUATE SURVEYS; *PROGRAM EFFECTIVENESS; OFFICE OCCUPATIONS EDUCATION; EDUCATIONAL RESEARCH; EMPLOYMENT PATTERNS; ENTRY WORKERS; *PROGRAM EVALUATION

ABSTRACT - TO DETERMINE WHETHER THE 1969 AND 1970 BUSINESS GRADUATES OF BRADLEY CENTRAL HIGH SCHOOL HAD RECEIVED ADEQUATE TRAINING IN HIGH SCHOOL FOR INITIAL JOB ENTRY INTO THE BUSINESS FIELD OR IF THE GRADUATES FELT THAT A VOCATIONAL OFFICE EDUCATION COURSE WOULD HAVE GIVEN THEM BETTER PREPARATION, DATA WERE OBTAINED FROM A DETAILED QUESTIONNAIRE WHICH WAS MAILED TO A RANDOMLY SELECTED SAMPLE OF 100 GRADUATES. INFORMATION CONCERNING THE BUSINESS EDUCATION CURRICULUM AND ENROLLMENT IN BUSINESS COURSES WERE OBTAINED FROM SCHOOL RECORDS. SOME MAJOR FINDINGS WERE: (1) THE BUSINESS EDUCATION CURRICULUM HAS NOT CHANGED DURING THE PAST 10 YEARS, (2) THE UNEMPLOYMENT RATE FOR THE BUSINESS GRADUATES WAS 11 PERCENT AS COMPARED WITH A RATE OF 2.5 PERCENT FOR BRADLEY COUNTY, (3) APPROXIMATELY 52.6 PERCENT OF THE GRADUATES HAD ENROLLED IN SOME TYPE OF POST-HIGH SCHOOL TRAINING, (4) APPROXIMATELY 30 PERCENT OF THE GRADUATES INDICATED THEIR HIGH SCHOOL BUSINESS TRAINING WAS INADEQUATE, (5) ONLY HALF OF THE MALE AND FEMALE GRADUATES WERE EMPLOYED IN THE BUSINESS FIELD, AND (6) APPROXIMATELY 83 PERCENT OF THE GRADUATES SAID THEY WOULD HAVE TAKEN THE VOCATIONAL OFFICE EDUCATION COURSE HAD IT BEEN OFFERED. (SB)

VT 017 652

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EDUCATION & WELFARE
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Research Series No. 14

A FOLLOW-UP STUDY OF THE 1969 AND 1970 BUSINESS MAJORS OF BRADLEY CENTRAL HIGH SCHOOL CLEVELAND, TENNESSEE

A Mini-Grant Research Project
Presented to
The Tennessee Research Coordinating Unit

by
Edith Baldree

April 1972

2371

The material in this publication was prepared pursuant to a contract with the Tennessee Research Coordinating Unit for Vocational Education, 909 Mountcastle Street, Knoxville, Tennessee, in cooperation with the University of Tennessee College of Education and the State Division of Vocational-Technical Education.

It has been prepared for distribution to selected agencies and individuals on a complimentary basis as permitted by funding under terms of the contract.

ABSTRACT

The purposes of this investigation were to determine whether the 1969 and 1970 business graduates of Bradley Central High School had received adequate training in high school for initial job entry into the business field or if the graduates felt that a vocational office education course would have given them better preparation.

The data for this follow-up study were obtained from a detailed questionnaire which was mailed to 100 randomly selected 1969 and 1970 business graduates of Bradley Central High School. Information concerning the business education curriculum and the class enrollment of the business courses for 1969 and 1970 was obtained from the principal's office of Bradley Central High School.

Between 45 and 43 percent of the total school enrollment were enrolled in the business curriculum during 1969 and 1970.

Most of the business graduates participating in the follow-up study lived and worked in Bradley County. The unemployment rate among the respondents was higher than the rate for Bradley County.

More than half of the respondents had continued their education after graduation from high school, although approximately 68 percent of those who had entered post high school education had already dropped out.

Half of the graduates responding to the questionnaire were employed in the business field. Approximately one-fourth of the graduates felt their business training in high school was inadequate, and particularly their training on business machines.

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The graduates reported the most helpful high school courses had been Typewriting I and II and Bookkeeping. The courses needed most which the graduates had not studied in high school were Shorthand I and II. Most of the graduates who had attended college felt Typewriting was needed for college-bound students.

Approximately 83 percent of the graduates felt Vocational Office Education would have prepared them better for the business world.

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INTRODUCTION

With society changing rapidly as a result of technological advances which influence business activity and personal living, business educators must strive to keep pace with technological changes and assume the responsibility for meeting the educational needs of youth who enter the business world.

The National Association of Secondary School Principals set forth the Ten Imperative Needs of Youth, the first of which states:

> All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations. (National Association of Secondary School Principals, p. 9)

The President's Advisory Council on Vocational Education in its 1968 report, "The Bridge Between Man and His Work," stated:

> In a world where the distance between school and work continually widens, the school must reach forward to assist the student across the gaps. . .It is not enough to dump the school leaver into a labor market pool. The school along with the rest of society must provide them a ladder, and perhaps help them to climb it. (Thompson, 61:291)

Every educational institution, in order to compete with the changes in the world outside the school, should be committed to changes with a purpose. A continuous evaluation of the business program being offered in our high school is necessary to determine whether it is meeting the needs of our students in today's world. (Wanous, 50:84)

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STATEMENT OF THE PROBLEM

This study was made to determine if the 1969 and 1970 graduates of Bradley Central High School who majored in business had received adequate training in high school for initial job entry in the field of business, or if the graduates felt a course in Vocational Office Education would have better prepared them.

RATIONALE

Bradley Central High School will move into a new school plant in the fall of 1972 which will allow for some revisions in the curriculum. Wanous stated in his study of curriculum standards that business education leaders believed that the offerings of the Business Department should be based on community surveys and follow-up studies of graduates. (Wanous, p. 53)

No record is available of a follow-up study ever having been made of Bradley Central High School business majors. Thus the results of this follow-up study may be used to study the educational and occupational status of the 1969 and 1970 business education graduates, to improve the guidance program for future business education students, and for possible revision of the 1972-1973 business education curriculum.

OBJECTIVES

In this study an attempt was made to determine if (1) Bradley Central High School met the needs of its 1969 and 1970 graduates who majored in business and (2) to gather suggestions for improving the business curriculum.

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METHODOLOGY

The follow-up method of research was used for this study, and a detailed questionnaire was used to collect the information.

Data for this study were obtained from permanent records and preliminary reports in the principal's office of Bradley Central High School, class record books for 1969 and 1970, personal interviews with present and former teachers in Bradley County, high school annuals, and responses to questionnaires mailed to all business graduates of Bradley Central for 1969 and 1970.

The follow-up study included 100 of the 1969 and 1970 Bradley Central High School graduates who completed a major in business. A student was classified as a business major if he had earned three or more credits in subjects classified as business subjects. Since the business majors graduating in 1969 totaled 111 and those graduating in 1970 totaled 84, 50 graduates from each class surveyed were randomly selected.

All addresses were obtainable for the 100 subjects selected for the study, although some of them had moved from the area. Twenty-two of the graduates selected for the study failed to return the questionnaire.

INTERPRETATION OF DATA

The findings of this study may be summarized as follows:

1. The business curriculum at Bradley Central has not changed during the past ten years with the exception that Shorthand II was added and dropped and that Office Occupations was added in the fall of 1970.

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2. During 1969 approximately 45 percent of the total school enrollment was enrolled in the business curriculum. During 1970 approximately 43 percent of the total school enrollment was enrolled in the business curriculum, or a loss of 2 percent when compared with 1969. There was a loss of 24 percent in the number of students graduating with a major in business in 1970 compared with 1969.

3. Most of the business graduates from Bradley Central lived and found employment in the Bradley County area. Ninety-one percent of the graduates remained in the area.

4. The unemployment rate for the business graduates was 11 percent as compared with the unemployment rate of 2.5 percent for Bradley County. All of the unemployed graduates were females.

5. Approximately 52.6 percent of the graduates had enrolled in some type of training after high school graduation. At the time the questionnaire was returned, 68 percent of the graduates who had enrolled in post-graduate training were no longer enrolled.

6. Fifty percent of the male graduates and 50 percent of the female graduates were employed in the field of business. Thus half of the graduates could not, or did not try to find employment in the business field. The employment record of the graduates indicated they had averaged 2.57 jobs since leaving high school.

7. Approximately 30 percent of the graduates indicated their business training in high school was inadequate.

8. Approximately 83 percent of the graduates said they would have taken Vocational Office Education had it been in the curriculum while they were in school.
9. Ninety-eight percent of the graduates responding to the question asking if they felt Typewriting was helpful in college indicated Typewriting should be included in the program of all college-bound students.

CONCLUSIONS

1. It can be concluded that while there was little loss in total enrollment in the business program in 1970, there was a sizable loss of students who concentrated their study of business.
2. The graduates did not receive adequate training on business machines while in high school.
3. The most helpful business subjects taken in high school were Typewriting I and II and Bookkeeping. After the graduates became employed, they found they needed Shorthand I and II.
4. The graduates indicated a need for training on business machines and for further study in mathematics.
5. The graduates indicated the training in several courses had been inadequate. No clue was offered as to whether the inadequacy resulted from poor instruction or inadequate subject matter.

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RECOMMENDATIONS

Based on the findings of the follow-up study of the 1969 and 1970 business graduates of Bradley Central High School, it is recommended that:

1. Records of the number of students enrolled in the business curriculum be kept by courses of study so that an enrollment trend may be ascertained, and that names, addresses, and telephone numbers of the enrollees also be kept for use in future follow-up studies.
2. The Business Department suggest minimum business courses for vocational business students.
3. The Business Department work closely with the Guidance Department in setting up the business curriculum and in the selection and placement of students in the business courses.
4. A Business Machines course be added to the curriculum.
5. The Business Department continue to offer Bookkeeping, General Business, Shorthand I, Typewriting I and II, as well as Salesmanship, Business Law, Marketing, and Distributive Education. It is also suggested that the present Office Occupations course be changed to Vocational Office Education.
6. A course in Personal Typewriting be offered by the Business Department for college-bound seniors.

7. The business graduates be encouraged to continue their formal education.
8. The Business Department establish a close relationship between the business faculty and the businessmen in the community in an attempt to improve the business training and to facilitate job placement of the business graduates.
9. The Business Department utilize the follow-up study of graduates and of dropouts and the community survey in evaluating, improving, and revising the business curriculum to meet the needs of its students.

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BIBLIOGRAPHY

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APPENDICES

APPENDIX A

FOLLOW-UP OF THE 1969-1970 BUSINESS MAJORS
BRADLEY CENTRAL HIGH SCHOOL
CLEVELAND, TENNESSEE

1. Name_____ Married? _____Yes _____No

Husband or wife's name_____

Address_____

Indicate your present status by checking the appropriate item.

_____Attending school
_____Permanently employed
_____Temporarily employed
_____Unemployed

2. If you are now attending, or have attended school since graduation, please check the type.

_____College or university
_____Private business school
_____Vocational school
_____Nurses school
_____Beauty school
_____Other (Name)_____

Name of school checked above_____

3. If you are now employed, or have been employed since you graduated from high school, what is your occupation?

_____Bank clerk
_____Beautician
_____Bookkeeper
_____Cashier
_____Credit clerk
_____Entertainer
_____Factory worker
_____File clerk
_____Insurance agent
_____Mechanic
_____Nurse's aide
_____Receptionist
_____Sales clerk
_____Secretary
_____Service station worker
_____Stenographer
_____Teacher's aide
_____Telephone operator
_____Truck driver
_____Typist
_____Waitress
_____Other_____
_____Other_____

Employment Record:

	Name of Firm	Length of Service
First position	_____	_____
Second position	_____	_____
Third position	_____	_____

4. Was the business training you had in high school of assistance in obtaining your first position? _____Yes _____No

5. Do you feel that your business training in high school prepared you well for your position or for college? _____Yes _____No

6. Please check the information asked for concerning the office machines you have used in your position.

Machine	Trained in High School	Trained in Post High School	Trained on the job
Adding machine	_____	_____	_____
Addressograph	_____	_____	_____
Billing machine	_____	_____	_____
Bookkeeping machine	_____	_____	_____
Calculator	_____	_____	_____
Cash register	_____	_____	_____
Dictaphone	_____	_____	_____
Duplicating machine	_____	_____	_____
Mimeograph machine	_____	_____	_____
Typewriter, electric	_____	_____	_____
Typewriter, manual	_____	_____	_____
Other_____	_____	_____	_____
Other_____	_____	_____	_____

7. Beginning with 1 as the most helpful, please rank in order of helpfulness all the business courses you had in high school.

_____Bookkeeping
_____Business Law
_____Distributive Education
_____General Business
_____Marketing
_____Shorthand I
_____Shorthand II
_____Typewriting I
_____Typewriting II
_____Salesmanship

8. Which of the above courses offered do you wish you had taken?

_____

_____

Why?_____

9. If you attended college, do you feel that all students who plan to to attend college should take typewriting? _____Yes _____No

10. If a course in Vocational Office Education had been offered, would you have taken it? (VOE is a course where all office skills generally used are incorporated into one course which is usually taught in a two-hour block of time.) _____Yes _____No

11. Please list below any training that you feel you received in your business courses in high school which was inadequate in helping you to perform the duties of your position.

12. What suggestions do you have for improving the business courses offered?

13. What courses other than business courses do you wish you had taken?

Please make any comment you wish to make on the back of this sheet.

APPENDIX B

BRADLEY CENTRAL HIGH SCHOOL
Cleveland, Tennessee 37311

November 10, 1971

Business Graduates of Bradley Central High School:

A survey is being conducted to determine the value and the benefit of your business training at Bradley Central High School. The information obtained from this survey will be used by the Business Department here at Bradley in planning the business courses and in helping future graduates to be better trained for the modern business world.

Please fill out the enclosed questionnaire as soon as possible and return it in the enclosed envelope. This will enable us to include your ideas and suggestions in the study.

Your prompt response to this questionnaire will be appreciated. Please feel free to make any comments you wish on the back of the questionnaire.

Sincerely,

Edith Baldree, Teacher
Business Department

Enclosures: Envelope
Questionnaire

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APPENDIX C

April 11, 1972

Mr. Robert U. Coker
Regional Research and
Development Coordinator
Research Coordinating Unit
2020 Terrace Avenue
Knoxville, TN 37916

Dear Mr. Coker:

The enclosed document constitutes my best effort in preparation of A Follow-Up Study of the 1969 and 1970 Business Majors of Bradley Central High School, Cleveland, Tennessee. I hope this study is satisfactory.

Expenses totaling $143.50 were incurred while conducting the research.

If there are any questions regarding this matter, please let me know.

Sincerely,

Edith Baldree

Edith Baldree, Teacher
Bradley Central High School

Enclosure

2393

VT 017 714
SEVERSON, JAMES C.
STUDENT ACTIVITIES IN THE VOCATIONAL-TECHNICAL SCHOOLS IN WISCONSIN. FINAL REPORT.

WISCONSIN STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION, MADISON; OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 21JUL72 174P.

DESCRIPTORS - *SCHOOL SURVEYS; *POST SECONDARY EDUCATION; *STUDENT ORGANIZATIONS; YOUTH CLUBS; *CCURRICULAR ACTIVITIES; RECREATIONAL ACTIVITIES; STUDENT INTERESTS; *VOCATIONAL EDUCATION

ABSTRACT - DURING A DESCRIPTIVE STUDY OF THE STUDENT ACTIVITIES OFFERED BY POST-SECONDARY SCHOOLS IN THE WISCONSIN VOCATIONAL-TECHNICAL SCHOOL SYSTEM, ALL SCHOOLS IN THE SYSTEM WERE VISITED, THE FACULTY AND STUDENTS WERE INTERVIEWED, AND WRITTEN MATERIALS WERE OBTAINED. IN ADDITION STUDENTS IN NINE SELECTED SCHOOLS WERE SURVEYED TO DETERMINE THE ACTIVITIES AND ORGANIZATIONS IN WHICH THEY PARTICIPATE OR WOULD BE INTERESTED IN PARTICIPATING. INCLUDED IN THIS REPORT ARE: (1) TABLES DESCRIBING ATTITUDES ABOUT CLUB ACTIVITIES AND DESIRED RECREATIONAL PROGRAMS AT THE DISTRICT AND STATE LEVEL BY MALE AND FEMALE STUDENTS, (2) CHARTS RELATING INFORMATION PERTAINING TO CLUB ADVISORS, FUNDING, AND MEETINGS AT THE DISTRICT LEVEL, (3) RECOMMENDATIONS THAT SHOULD BE GIVEN CONSIDERATION IN FUTURE PLANNING OF STUDENT ACTIVITIES, AND (4) OTHER INFORMATION OF VALUE TO SCHOOLS CURRENTLY BEGINNING OR EXPANDING THEIR ACTIVITIES PROGRAM. SOME CONCLUSIONS WERE: (1) MALE PARTICIPANTS IN STUDENT ORGANIZATIONS TEND TO BECOME ACTIVE MEMBERS BECAUSE OF SOCIAL ACTIVITIES OFFERED, WHILE FEMALES TEND TO BELONG BECAUSE OF ACADEMIC AND EMPLOYMENT BENEFITS, AND (2) STUDENTS IN LARGER COMMUNITIES TEND TO RELY ON THE CITY FOR RECREATION AND ENTERTAINMENT SOURCES, WHILE STUDENTS IN SMALLER COMMUNITIES RELY ON THE SCHOOL. (SB)

VT 017 714

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Final Report

01-030-151-222

STUDENT ACTIVITIES IN THE VOCATIONAL-TECHNICAL SCHOOLS IN WISCONSIN

By

James D. Severson

July 1, 1972

Date Submitted: July 21, 1972

The research reported herein was performed pursuant to a grant or contract with the Wisconsin Board of Vocational, Technical and Adult Education, partially reimbursed from an allocation of Federal funds from the U. S. Office of Education, U. S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official State Board or U. S. Office of Education position or policy.

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PURPOSE OF STUDY

In recent years pressure has been applied to organize student activities in the vocational-technical school system in Wisconsin. The main sources of criticism are the State Board of Vocational-Technical Education and the North Central Accreditation Association.

The main purpose of this paper entitled "Student Activities in the Vocational-Technical School System in Wisconsin" is a descriptive study of the present activities offered at this post-high school level. Included in this study is:

1. Tables describing student attitudes about club activities at the district and state level.

2. Tables describing desired recreational programs at the district and state level by male and female students.

3. Charts relating information pertaining to club advisors, funding, and meetings at the district level.

4. Recommendations, at the state and district level, that should be given consideration in future planning of student activities.

5. Miscellaneous items that should be beneficial to schools that are currently beginning or expanding their activities program.

Activities & Procedures

The study was conducted during the spring semester of the 1971-72 academic school year. The writer visited all the schools in the vocational-technical school system, interviewed faculty and students, and obtained written materials. However, only the following schools participated in the distribution of the survey instruments to the student body; Eau Claire, Fennimore, Fond du Lac, Janesville, Madison, Rice Lake, Wausau, Waukesha, and Wisconsin Rapids.

The failure to survey one hundred percent of the schools in the vocational-

technical school system was caused by:

1. A lack of cooperation
2. Problems in distribution of the survey instrument
3. Union contracts sometimes forbid teacher involvement in conducting surveys
4. Problem of surveys being misplaced in the mail

Abstract

The writer, in conducting the survey, discovered that each school in the vocational-technical school system has an identity of its own. Each school differed in philosophy and activities because of the following criteria:

1. Philosophies of district boards and directors varies throughout the state.
2. The size of sociological background of the student body varies from district to district.
3. Location of institutions and type of programs offered play an important role in determining over-all participation in student activities.
4. Educational backgrounds of the activities directors bore a direct relationship to the level of activities offered.

Also, there were other significant conclusions that must be drawn from the over-all study. These conclusions, based on the surveys returned, interviews conducted with faculty and student body, and written materials made available to the researcher, are:

1. Male participants in student organizations tend to become an active member because of social activities offered. This is especially true in the Trade and Industrial areas.
2. Female students tend to belong to student organizations because of academic and employment benefits to be received.

3. Male students that do not participate in student activities either work part-time or just simply lack interest in belonging to any formal group.

4. Female students that chose not to participate in student organizations are married, divorced, or need the time for studies.

5. The smaller schools normally lack written guidelines or policies for student activities.

6. There is a lack of recreational facilities throughout the vocational-technical school system.

7. Women's and co-educational recreation programs are de-emphasized in the school system in comparison to the men's activities.

8. Students in larger communities, particularly Madison and Milwaukee, tend to look to the city to fulfill their entertainment needs.

9. Students in smaller communities, such as Fennimore and Rice Lake, tend to look to the school for sources of recreation and entertainment.

10. The vocational-technical schools with the most qualified personnel in student activities tend to offer a more enriched program.

11. Schools with large athletic budgets tend to spend very little on intramural programs.

12. Alumni associations, except in an area of training basis, are not successful in the vocational-technical system. Apparently, the student does not identify with the institution after graduation.

RECOMMENDATIONS

The writer, based on the survey, interviews, and written materials suggests that the following recommendations be considered.

State Level

1. The State Board of Vocational-Technical Education hire one person to act as coordinator of a state-wide organization.

2. The schools in the vocational-technical school system should develop an efficient means of communication through a WATTS or DIAN system. Presently, this lack of communication is a major obstacle for improving activities in the state system.

District Level

3. District boards should begin to pay the activities directors salary instead of exploiting the activity fee. Many institutions spend such a large sum of monies on salaried personnel that the money for activities is depleted.

4. Schools should hire qualified personnel to supervise the activities program. Presently, some institutions assign student services personnel the job and they possess little background or interest for the task.

5. Each school should develop school policy pertaining to student activities. This would include an intramural and organizational handbook.

6. The activities director, if possible, should be considered a full-time job. Presently, one activities director has the following job description: Public information, school paper advisor, student center supervisor, advisor to student senate, and intramural director. Oddly enough, the enrollment of this school is projected to exceed 2,000 students next fall.

7. Each activities director should hold an in-service training session for club officers in the fall of each school year. Presently, Wausau and LaCrosse

offer this particular service with good success. This might be a successful tool to communicate to students and to the administration.

8. Social activities, especially in the Trade and Industrial areas, play an important role in the formation of student organizations.

9. Student senate officers and advisors should periodically analyze and update their present constitutions. Some of the present constitutions are unworkable or offer insufficient guidelines. Also, one school reported that no constitution presently existed.

10. More emphasis should be placed on intramural activities in relation to the inter-collegiate sports. Presently, the students pay an activity to support varsity teams and sometimes receive little or nothing in return.

11. The vocational-technical schools, if possible, should obtain recreational facilities such as gyms, softball fields, football fields, etc.

12. More emphasis should be placed on women's intramurals since they too pay an activity fee. It appears many schools simply refuse to acknowledge that female students are interested in participating.

In fact, one activities director related that girls football is only a fad and therefore, it would be foolish to initiate such a program.

13. Co-educational activities, especially archery, volleyball, swimming, and tennis, should become a part of the recreation program. This could serve both a recreational and social function in our institutions.

STUDENT PARTICIPATION IN STUDENT ORGANIZATIONS

State-wide Survey

A total of 2,640 students were surveyed to obtain the compository charts given on the following pages. These students were selected, at random, from the following schools: Eau Claire, Fennimore, Fond du Lac, Janesville, Madison, Rice Lake, Wausau, Waukesha, and Wisconsin Rapids.

The students involved in the study were required to rank, in order, the three main reasons they decided to join or not to join a student organization. Their responses were then weighted according to rank. A first choice was assigned three points; a second choice, two points; and a third choice, one point.

The main purpose of the survey instrument was to evaluate:

1. Why students belong to student organizations.
2. Why students elect not to belong to a student organization.

PARTICIPANTS IN STUDENT ORGANIZATIONS
Vocational - Technical Systems in Wisconsin

Area of Training	Total Male Sample: 1161								
	A	B	C	D	E	F	G	H	No. Surveyed
Business & General	280	301	270	267	267	41	49	54	254
Chef Training	53	25	18	14	38		8		27
Trade & Industrial	675	488	542	332	575	129	189	93	880
TOTAL	1008	796	830	613	880	162	246	147	1161

Area of Training	Total Female Sample: 453								
	A	B	C	D	E	F	G	H	No. Surveyed
Business & General	327	381	367	268	268	48	45	40	304
Chef Training	17	3	10	4	13	1	4		9
Health Occupations	98	115	167	86	145	37	5	31	128
Trade & Industrial	9	5	11	18	16	2	2		12
TOTAL	451	504	555	376	442	88	56	71	453

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

NON PARTICIPANTS IN STUDENT ORGANIZATIONS
Vocational - Technical Systems in Wisconsin

Area of Training	Total Male Sample: 754								
	A	B	C	D	E	F	G	H	No. Surveyed
Business & General	417	168	73	251	414	282	348	190	370
Chef Training	6	5	7	11	14	3	17	7	13
Health Occupations	5	5	2	3	7	3		3	9
Trade & Industrial	607	213	177	385	527	523	566	251	362
TOTAL	1035	391	259	650	957	811	971	450	

Area of Training	Total Female Sample: 372								
	A	B	C	D	E	F	G	H	No. Surveyed
Business & General	321	84	116	172	569	294	366	273	305
Health Occupations	68	70	23	34	103	30	23	25	67
TOTAL	389	154	139	206	672	324	389	298	372

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belongin to any student organizations
H. Other (please specify)

INTERPRETATION OF SURVEYS

Student Organizations Survey on the Participating & Non-Participating Student

The following statements are applicable from the tables listing the reasons for participation and non participation in student organizations in the vocational-technical school system.

1. Male students participate in student organizations in order to become involved with social activities, such as parties, dances, etc. This is particularly true with the Trade and Industrial students.

2. Male Business students join student organizations basically to meet new people. However, social activities and academic benefits are considered important.

3. The female respondents felt the opportunity to benefit academically was the main reason for belonging to student organizations.

4. The Health Occupation participants were primarly interested in furthering their educational goals and meeting people with common interests.

5. The male non participants were not active due to a lack of time. They listed the main reasons as working part-time or needing the time for studies. However, many simply lacked an interest to belong to any organization.

6. The Trade and Industrial non-participating student felt organizations are not consistent with educational goals.. They also lacked interest in participating in any organizations.

7. The female non participant overwhelmingly felt student organizations were not beneficial to their education.

RECREATION SURVEY
IN VOCATIONAL-TECHNICAL SCHOOL SYSTEMS IN WISCONSIN

A total of 1,729 male and 868 female students responded to the recreation survey. These students attend: Eau Claire, Fennimore, Fond du Lac, Janesville, Madison, Rice Lake, Superior, Wausau, Waukesha, and Wisconsin Rapids.

The main purpose of the survey was to:

1. Find student attitudes towards the opportunities to participate, the diversification of recreation programs, and facilities available for student use in the vocational-technical school systems in Wisconsin.

2. Discover which programs, if any, that students want added to present recreational programs.

2406

MEN'S RECREATION SURVEY

Vocational-Technical School Systems in Wisconsin
Total Sample: 1729

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	1066/70%	218/14%	254/16%
B. Presently, the intramural program offers a variety of activities	861/53%	315/19%	457/28%
C. Adequate facilities and supervision are provided	605/38%	532/32%	494/30%
D. Inter-school competition tends to de-emphasize the importance of intramurals	529/31%	681/32%	519/30%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

357	Archery	205	Skiing	217	Handball
132	Basketball	231	Softball	43	Lacrosse
127	Fencing	254	Swimming & Diving	174	Soccer
238	Football	179	Track & Field	50	Squash
136	Hiking	203	Baseball	195	Tennis
116	Ice Hockey	139	Bowling	138	Volleyball
483	Rifle	70	Cross Country	288	Wrestling
72	Rugby	216	Golf	94	Water Polo
				109	Other

WOMEN'S RECREATION SURVEY

Vocational-Technical School Systems in Wisconsin
Total Sample: 868

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	626/73%	115/13%	127/14%
B. Presently, the intramural program offers a variety of activities	347/41%	205/24%	307/35%
C. Adequate facilities and supervision are provided	293/35%	236/28%	311/37%
D. Inter-school competition tends to de-emphasize the importance of intramurals	301/35%	245/28%	321/37%

Please check any intramural program that is presently non-existend in which you would like to be a participant.

156	Archery	110	Skiing	15	Handball
57	Basketball	84	Softball	4	Lacrosse
33	Fencing	172	Swimming & Diving	35	Soccer
28	Football	38	Track & Field	6	Squash
104	Hiking	21	Baseball	184	Tennis
8	Ice Hockey	73	Bowling	95	Volleyball
31	Rifle	14	Cross Country	25	Wrestling
5	Rugby	52	Golf	11	Water Polo
				44	Other

INTERPRETATION OF RECREATION SURVEY IN VOCATIONAL-TECHNICAL SCHOOL SYSTEMS IN WISCONSIN

The writer, based on the preceding tables, feels that the following statements may be concluded:

1. Male students agree that all student have the opportunity to participate in recreational activities.

2. Male students slightly agree that adequate facilities, supervision, and a variety of recreational activities are available at the institutions under study.

3. Male students definately feel that archery and rifle would be beneficial to present recreation programs.

4. Female respondents agree that all students have an opportunity to participate in recreational activities.

5. Female students showed slight disagreement and uncertainity that adequate facilities, supervision, and programs are offered at their technical institutions.

6. Tennis, swimming, and archery are overwhelmingly the most popular sports that the female respondents feel should be annexed to present recreational programs.

STUDENT ORGANIZATIONS SURVEY

Club Funding, Advisory Selection, & Activity Meetings

In order to obtain information pertaining to advisory selection, club finding, and meeting times, thirteen schools were surveyed. These school districts included: Eau Claire, Fennimore, Fond du Lac, Green Bay, Kenosha, LaCrosse, Madison, Milwaukee, Rhinelander, Rice Lake, Wausau, Waukesha, and Wisconsin Rapids.

The main purpose of this survey was to discover:

1. How clubs and student organizations receive funds.
2. How student senates and organization advisors are selected.
3. How much, if any, compensation do advisors receive for time spent on organizational activities.
4. How often are advisory meetings conducted at the local level.
5. How many activity directors, if any, delegate full-time responsibility to club and recreational activities.

INTERPRETATION OF SURVEY

Organizational Funding, Advisory Selection & Meetings, & Compensation

The following statements can be concluded from the chart pertaining to funding, advisory selection, meetings, and compensation:

1. The student senates of all the vocational-technical schools receive funds from the activity fees.

2. Clubs basically raise funds through projects or activity fees. However, in three schools each club is budgeted money through the student senate.

3. Student services personnel, with the exception of Eau Claire, are appointed advisors to the student senate.

4. Five schools, out of the thirteen surveyed, compensate club advisors with money or reduced teaching loads.

5. The smaller schools normally conduct student organization meetings during school time. These meetings are held during an activity period or a block hour when no classes are conducted.

6. An overwhelming majority of schools have two or less advisory meetings per year.

7. Only four schools employ a full-time activities person to supervise student organizations and recreation activities. None of the smaller schools (under 1,500) have a full-time position.

STUDENT ACTIVITIES SURVEY
FOX VALLEY TECHNICAL INSTITUTE

Name_____

I. What types of student activities would you like to participate in during the coming school year? If you are interested in participating in these events for the coming school year, please place an "x" before each one of interest to you.

INTRAMURALS

361	Bowling	204	Football
64	Tennis	202	Volleyball
94	Golf	84	Handball
268	Pool	222	Swimming
247	Basketball	41	Other

ATHLETICS (Interschool)

216	Football	166	Baseball
168	Basketball	105	Physical Education

STUDENT PUBLICATIONS

82	Newspaper	69	Annual
5	Alumni News		

MUSIC

47	Band	66	Chorus

CLUBS AND ORGANIZATIONS

16	Speech	39	Dramatics
152	Departmental Clubs	59	Student Senate

II. I would be interested in being an officer or committee member in the following organizations.* (Please put an "x" in front of those organizations you would be interested in helping to organize)

105	Student Senate	53	Newspaper
50	Annual	178	Departmental Clubs

III. What student activity fee would you be willing to pay (by semester) for these activities?

292	$5.00 (Current Fee)	258	$7.50 (Recommendation)
40	$10.00	5	$15.00

COMMENTS:

2412

*Student help is needed in the organization of these activities. Please do not hesitate to volunteer your services for these organizations.

RECOMMENDATIONS

District 12 is in the process of planning a new vocational-technical institute. The new school will be located on a site near Appleton. It is approximately one and half miles from the residential area of the city. If you were going to attend this school, what recommendations would you make concerning the type of facilities you would like to see developed on campus?

STUDENT ACTIVITIES

Intramurals

63%	204	Bowling	54%	174	Football
33%	106	Tennis	39%	124	Volleyball
21%	68	Golf	17%	54	Handball
50%	162	Pool	51%	164	Swimming
63%	203	Basketball			Other

Athletics (Interschool)

69%	222	Football	33%	106	Baseball
70%	226	Basketball			Other

Student Publications

79%	253	Newspaper	48%	153	Annual
32%	103	Alumni News			

Music

30%	95	Band	25%	81	Chorus

Clubs and Organizations

22%	72	Speech	24%	78	Dramatics
57%	184	Departmental Clubs	55%	177	Student Government

On the basis of the number of activities that you have selected, what do you feel would be a fair amount of student contribution a semester to support these activities?

2%	8	$0	49%	29	$10
34%	108	$5	13%	42	$15
				6	Uncertain

Housing

37%	120	Home	9%	158	Private Room
45%	146	Dormitory on Campus	17%	56	Private Apartment
13%	41	Dormitory in Residential Area			

Bookstore - Student Supplies

79%	255	Bookstore	32%	103	Drug Store

Fox Valley Technical Institute
Appleton, Wisconsin

I. INTERPRETATION OF SURVEY

The survey instrument designed for this particular survey was constructed by the Student Services personnel at Fox Valley. The survey attempted to find out what types of activities students were interested in participating in. Also, the survey found out student attitudes toward the amount of activity fee assessed to students at the technical institute.

II. RECOMMENDATIONS

The writer of this paper, using the survey results as a guide, suggests the following recommendations:

1. An intramural program should develop the following:

    a. Basketball (Men)
    b. Bowling (Co-ed)
    c. Flag Football (Men)
    d. Swimming
    e. Tennis (Co-ed)
    f. Volleyball (Co-ed)

2. Clubs should be initiated in the following areas:

    a. Band
    b. Dramatics
    c. Newspaper
    d. Speech
    e. Student Senate

However, there should be caution not to push the club onto the student but to initiate them as student need dictate them.

The writer, based on observations and interviews with Student Services personnel, suggests that the following recommendations be considered:

1. The school should hire someone to supervise the recreation center. Presently, they have overloaded the person in charge of that program. This person should be able to get along with students, type, etc.

2. A check-out center should be established in the recreation center.

This might include:

a. Basketballs
b. Cards
c. Checkers
d. Chess
e. Cribbage
f. Football Equipment
g. Horseshoes
h. Softball Equipment
i. Tennis Equipment

3. The center might run tournaments such as:

a. Checkers
b. Chess
c. Cribbage
d. Ping Pong
    1. Singles
    2. Doubles
    3. Co-ed Doubles
e. Pool (Men & Women)
    1. 14 - 1
    2. 8 Ball
    3. Straight Ball

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male

District I Technical Institute - Eau Claire

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	12	19	4	10	23	4	4	5	14
Agri-Business	10	8	13	11	14		6	3	12
Air-Conditioning & Refrigeration Tech.	5	3	3	3	4				4
Auto Mechanics	49	27	34	14	41	16	18	5	37
Civil-Structural Tech.	18	20	2	4	16		12		12
Data Processing	7	14	7	5	17	2	5	3	10
Diesel				3		2	5		2
Drafting - Mechanical		6			2			1	3
Electrical Power Distribution (Lineman)	2	1				3			1
Electronic Servicing	5	7	2		5	2	6		5
Fluid Power Maintenance and Technology	3	4			6			3	2
Industrial Electronics Technology		2		3				1	1
Machine Tool	29	19	5	6	17	1	1	3	15
Marketing	3	7	6	7	6	1		6	6
Mechanical Design - Drafting Technology	1	5		2	4				2
Metal Fabrication	3	2				1			1
Precision Inspection & Materials Testing	6	4	16	5	3			2	7
Quantity Food Preparation	26	10	10	8	17		1	3	13
Refrigeration Servicing	3	9	13	9	1	1		3	7
Restaurant & Hotel Cookery	19	15	8	3	17		4		11
TOTAL	201	182	123	93	193	33	62	38	165

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION CLUB PARTICIPANTS
Female

District I Technical Institute - Eau Claire

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Account Clerk	1	2			3		5		2
Accounting	3	5	1		1		6	2	3
Clinical Lab Assistant	26	10	36	2	21	7	1	12	21
Data Processing	4	14	3	5	5	1		3	27
Data Processing - Machine Operator	1	2	3	2	3				2
General Clerical	8	16	7	2	7		2		7
General Clerical - Med.		1		2	4		2	3	2
Marketing - Fashion Merchandising	2	6	14	7	12	4	6	6	10
Medical Lab Tech.	5	7	33	4	15	5	1	3	13
Practical Nursing	3	11	30	1	21	7	1	8	16
Quanity Foods Preparation	8	3	3	3	5		3		4
Restaurant & Hotel Cookery	9		7	1	8	1	4		5
Secretarial Science	5	20	7	2	22	1	6	3	11
TOTAL	75	97	144	31	127	26	37	40	82

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male

District I Technical Institute - Eau Claire

Male Non Participants	*Reasons for Not Belonging A	B	C	D	E	F	G	H	No. Survey.	Want Club
Accounting	53	22	15	37	71	46	64	20	60	4
Agri-Business	22	10	2	14	19	7	20	18	20	2
Air-Cond. & Refrig.	20	12	10	17	28	21	14	6	23	3
Appliance Servicing	12	12	5	1	3	5	15	2	9	
Auto Mechanics	6	5	1	9	7	11	13	13	15	4
Barbering	3	8	5	12	11	11	10	2	11	6
Civil-Structural Tech.	20	12	2	16	38	19	21	7	24	2
Clinical Lab Assistant	1			2				3	1	
Data Processing	13	4	1	9	19	.9	23	8	16	
Data Processing Mach. Op.					2		1	3	1	
Diesel	14	6	5	20	20	18	21	2	18	2
Drafting - Mechanical	33	6	6	17	33	23	12	1	23	1
Elec. Power Dist.	2	8		3	9	11	8	1	5	2
Electronic Servicing	18	3	9	15	18	22	31	7	5	1
Fluid Power Main. & Tech.	18	6	3	13	13	8	15	12	15	3
Industrial Elec. Tech.	9	2	2	1	6	2	4	5	6	1
Machine Tool	7	2		3		5	10		16	1
Marketing	39	14	3	30	40	22	25	18	38	3
Marketing - Fash. Merch.	1			5	2			3	2	
Mech. Design - Draft.		7		2	6	8	1	2	5	
Metal Fabrication	9	4		11	8	8	9	3	10	
Police Science	26	10	6	5	20	15	14	7	20	11
Quantity Foods Prep.			7	11	9	1	17	6	9	
Refrigeration Servicing	8	4	2	11	3	6	13	6	10	3
Restaurant & Hotel Cook.	6	5			5	2		6	4	
Welding	5	14	3	8	4	3	12	1	10	1
Wood Technics	25	7	13	10	17	16	18	6	19	1
TOTAL	370	183	100	290	411	299	391	168	384	

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Female

District I Technical Institute - Eau Claire

	*Reasons for Not Belonging									
Female Non Participants	A	B	C	D	E	F	G	H	No. Survey.	Want Club
Account Clerk		3			6	4	5		3	
Accounting	26	6	7	8	30	15	14	7	19	2
Data Processing	5	3	1	5	13	7	1	7	7	1
Data Processing - Machine Operator	6				5		2	9	4	
Drafting - Mechanical			2				1	3	1	
General Clerical	37	10	20	41	94	44	59	18	60	6
General Clerical - Med.	29	2	10	15	39	24	39	8	28	7
Practical Nursing	2	3		2	13	2	2	3	5	
Marketing		3			7	3	2	2	3	
Marketing - Fashion Merchandising	6	3	3	7	9	8	7	4	13	3
Secretarial Science	60	3	21	16	100	43	78	42	67	7
TOTAL	171	36	64	94	316	150	210	103	210	

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

District I Technical Institute
Eau Claire, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	389 / 75.68%	49 / 9.53%	76 / 14.79%
B. Presently, the intramural program offers a variety of activities	300 / 56.17%	59 / 11.04%	175 / 32.79%
C. Adequate facilities and supervision are provided	285 / 54.91%	72 / 13.87%	162 / 31.22%
D. Inter-school competition tends to de-emphasize the importance of intramurals	257 / 50.29%	96 / 18.78%	158 / 30.93%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

90	Archery	33	Skiing	65	Handball
20	Basketball	41	Softball	3	Lacrosse
35	Fencing	40	Swimming & Diving	37	Soccer
20	Football	38	Track & Field	3	Squash
26	Hiking	31	Baseball	43	Tennis
10	Ice Hockey	21	Bowling		Volleyball
121	Rifle	10	Cross Country	73	Wrestling
19	Rugby	68	Golf	12	Water Polo

Other (please specify):

1	Bicycling	2	Foosball	1	Nature Club
3	Boxing	2	Gymnastics	2	Paddleball
1	Canoeing	1	Horseback Riding	1	Scuba Lessons
1	Curling	1	Horseshoe	1	Ski Jumping
1	Cycling	6	Karate	2	Snowmobiling Races
1	Dartball	1	Motorcycle Club	5	Weightlifting
2	Drag Racing	1	Music		

District I Technical Institute
Eau Claire, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

		Agree	Disagree	Uncertain
A.	All students have the opportunity to participate	231 / 79.38%	25 / 8.59%	35 / 12.03%
B.	Presently, the intramural program offers a variety of activities	139 / 47.93%	17 / 5.86%	134 / 46.21%
C.	Adequate facilities and supervision are provided	152 / 52.77%	20 / 6.94%	116 / 40.29%
D.	Inter-school competition tends to de-emphasize the importance of intramurals	147 / 51.04%	17 / 5.90%	124 / 43.06%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

33	Archery	28	Skiing	4	Handball
12	Basketball	21	Softball		Lacrosse
12	Fencing	40	Swimming & Diving	6	Soccer
2	Football	3	Track & Field		Squash
27	Hiking	4	Baseball	50	Tennis
2	Ice Hockey	25	Bowling	7	Volleyball
5	Rifle	3	Cross Country	3	Wrestling
1	Rugby	16	Golf	2	Water Polo

Other (please specify):

1	Badminton	1	Horseback Riding	2	Tumbling
2	Biking	1	Judo	1	Water Ballet
1	Canoeing	1	Snowmobiling	1	Water-skiing
1	Gymnastics	1	Swim Team		

District I Technical Institute - Eau Claire

STUDENT RESPONSES

Comments were as follows:

Was really disappointed when I found out there was no gym here

Felt this area of study has some fine instructors and do a complete and thorough job of instructing classes

I would like to get active in these sports here

Don't have much time

Don't think my evaluation is fair--don't know about school activities

A school of this size should compete with other vocational schools

Directors try hard but need more facilities

Everythink OK but play-off system for every sport should include everyone

This school needs more involvement

Just can't get excited about sports because I do not need that much competition to survive

Does anybody really care

Would be able to participate if activities weren't in the afternoon

Really an excellent intramural program at present

Should have swimming pool

Felt clubs were used as "status" stepping blocks

Think the activities are fine for those that are interested

Felt that clubs aren't advertised enough

More promotion for girls for sports

Not many students involved because of jobs and rides

Think the school better get going in having more activities

Would especially like to learn how to swim

Feel that the groups that are now playing sports are very close--hard to get into if "you weren't a friend."

Student Responses

Felt too much emphasis is being put on these organizations--here for education and nothing else

Haven't been enrolled long enough but might join

Most students can't participate because of part-time jobs

See football as a good sport but just can't see playing touch

Why can't we compete with the college

Wish we would have a ski team to compete with other schools

Major reason for the high mortality rate for a good number of students is non-sufficient preparation for their respective classes. To push for a total country club atmosphere is ridiculous

Too too much of my time

Not interested

Felt that an area should be set aside for weight lifting

Pretty well organized school; instruction is excellent; free time can be spent many ways

Would like to participate, but schedule won't permit it

Would like to play volleyball and basketball but transportation a problem

Hard to find transportation to and from activities

There is an uncommonly good atmosphere here at District I. Please to go to classes and/or cafeteria--feel like I really belong

Wish more students were involved

Would like to see a rifle club started here

District I Technical Institute - Eau Claire
Eau Claire, Wisconsin

I. INTERPRETATION OF SURVEY

A. MALE PARTICIPANTS - TABLE

The main reason the male students participated in club activities was strictly social. The three main reasons, in order, for participating were:

1. Social activities offered
2. Provides an opportunity to meet new people
3. Provides an opportunity to meet people with common interests

B. FEMALE PARTICIPANTS - TABLE

The main reason the female students participates, unlike the males, was because of academic benefits derived from belonging to a club. Another reason was the opportunity to meet people with common interests. However, it appears that these two reasons are directly related. The three main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Provides an opportunity to meet people with common interests
3. Provides an opportunity to meet new people

C. MALE NON PARTICIPANTS - TABLE

The main reasons the male students elected not to participate in club activities was the lack of time and interest. Surprisingly, the respondents indicated that other activities offered during the activity period detered them from participating. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Lack interest in belonging to any student organization
3. Work part-time

D. FEMALE NON PARTICIPANTS - TABLE

The female non participants, like the males, felt a lack of time and interest were the main reasons for not belonging to a student organization. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Lack interest in belonging to a student organization
3. Work part-time

E. MEN'S RECREATION

The male respondents agreed that all students have an opportunity to participate in recreational activities. However, uncertainity existed in their mixed feeling towards adequate facilities and the variety offered through the recreation program.

It was apparent that the male students would like the opportunity to participate in the following programs:

1. Archery
2. Fencing
3. Golf
4. Handball
5. Rifle
6. Skiing
7. Soccer
8. Tennis
9. Wrestling

F. FEMALE RECREATION

The female respondents agreed that all students have the opportunity to participate in recreational activities. However, like the male students, felt uncertain about the diversificiation of the program and facilities available for their use.

They felt the following activities should be initiated into the present program:

1. Archery
2. Golf
3. Hiking
4. Skiing
5. Tennis

II. RECOMMENDATIONS

The writer of this paper, using the surveys as a guide, recommends the following suggestions:

1. More social events should be sponsored by the Trade and Industrial Clubs at District One. It appears that they lack the opportunity to become acquainted with female students because of the block scheduling.

2. The creation of a Police Science Club should be explored and possibly initiated.

3. The following programs should be intergrated into the recreation program:

a. Archery (Co-ed)
b. Golf (Co-ed)
c. Handball (Men)
d. Rifle (Men)
e. Tennis (Co-ed)
f. Wrestling

Based on observations at District One and interviews with faculty and staff, the writer feels that the following recommendations should be considered:

1. Develop some type of in-service training programs for student organizations.

2. Expand the recreational facilities as the student body enrollment increases. This should include a football and softball field.

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Southwest Wisconsin Vocational - Technical School
Fennimore, Wisconsin

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	4	3	1		4				2
Accounting Assistant	1	1	2	3	2		3		3
Accounting Clerk			2	3	1				1
Agriculture Building Serviceman	7	6		1	1			3	3
Agriculture Mechanic	21	28	16	14	18	6	11	6	21
Auto Mechanic	5	9	5		5	1	2	3	4
Food Preparation	7	9	1		5			2	4
Municipal Services		2	1					6	2
TOTAL	45	58	28	21	36	8	16	20	40

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting		1	2	3					1
Accounting Assistant	3		2	4	3				2
Accounting Clerk	6	7	7	3	7				5
Business Machines	5	7	2	1	6		3		4
Clerk Typist	11	9	3	2	5				5
Stenography	8	13	3	2	11	7	3	1	9
TOTAL	33	37	19	15	32	7	6	1	26

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Southwest Wisconsin Vocational - Technical School
Fennimore, Wisconsin

Male Club Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting Assistant	6	6	2	7	3	6	4	7	1	7
Accounting Clerk	3			2			1			1
Agriculture Building Serviceman	3			6	1	8	14	4	1	6
Agriculture Mechanic	15	1	10	15	7	9	12	11		15
Auto Mechanic	26	5	12	9	7	41	31	12		26
Business Machines				2	3	2	3			2
Municipal Services				2	3	2		3	1	2
TOTAL	53	12	24	43	24	68	65	37	3	59

Female Club Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	3									1
Accounting Assistant		3				2	1			1
Accounting Clerk	7	2	2	7	7	7	8	5	3	8
Business Machines	6		2	4	8	7	11	4	1	9
Clerk Typist	6		5	3	9	2	2	7		7
Stenography	7	3	7	2	28	12	11	17	1	16
TOTAL	29	8	16	16	52	30	33	33	5	42

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organization
H. Other (please specify)

Southwest Wisconsin Vocational - Technical School
Fennimore, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	76 / 76.00%	19 / 19.00%	5 / 5.00%
B. Presently, the intramural program offers a variety of activities	34 / 34.00%	30 / 30.00%	36 / 36.00%
C. Adequate facilities and supervision are provided	42 / 40.78%	25 / 24.27%	36 / 34.95%
D. Inter-school competition tends to de-emphasize the importance of intramurals	36 / 37.11%	39 / 40.21%	22 / 22.68%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

33	Archery	19	Skiing	10	Handball
15	Basketball	33	Softball	4	Lacrosse
10	Fencing	25	Swimming & Diving	18	Soccer
31	Football	17	Track & Field	6	Squash
15	Hiking	24	Baseball	18	Tennis
7	Ice Hockey	17	Bowling	2	Volleyball
31	Rifle	12	Cross Country	18	Wrestling
7	Rugby	19	Golf	9	Water Polo

Others: Pool, Racing, and Badminton

Southwest Wisconsin Vocational - Technical School
Fennimore, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

		Agree	Disagree	Uncertain
A.	All students have the opportunity to participate	59/90.78%	1/1.53%	5/7.69%
B.	Presently, the intramural program offers a variety of activities	29/43.95%	11/16.66%	26/39.39%
C.	Adequate facilities and supervision are provided	34/50.75%	4/5.97%	29/43.28%
D.	Inter-school competition tends to de-emphasize the importance of intramurals	39/60.01%	10/15.38%	16/24.61%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

18	Archery	8	Skiing		Handball
8	Basketball	20	Softball	1	Lacrosse
	Fencing	17	Swimming & Diving	8	Soccer
4	Football	13	Track & Field	1	Squash
11	Hiking	2	Baseball	17	Tennis
	Ice Hockey	10	Bowling	2	Volleyball
2	Rifle	2	Cross Country	2	Wrestling
	Rugby	3	Golf		Water Polo

Other: Drama Club, Badminton

Southwest Wisconsin Vocational - Technical School
Fennimore, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Not enough selection

Too far to drive for a majority of us

This school needs a gym--would have much more participation

Our school should have more involvement in the intramural program

Activities offered are not enjoyable

Would like to get involved

Need more activities

Don't have time

I'm forced to attend

Should have intramurals during the day and not at night because it's too far to commute

Work full time

Need a good weight lifting program

Have home and family

Work and go to school

SOUTHWEST WISCONSIN VOCATIONAL AND TECHNICAL SCHOOL
Fennimore, Wisconsin

I. Interpretation of Surveys

A. MALE PARTICIPANTS - TABLE

The main reason the male students participated in club activities was because of the social benefits derived from the club. The three major reasons, in order, for participating were:

1. Provides an opportunity to meet new people
2. Social activities that are offered
3. Provides an opportunity to meet people with common interests

B. FEMALE PARTICIPANTS - TABLE

The female participants, like the males, participated in clubs strictly from a social point of view. The three main reasons, in order, for participating were:

1. Provides an opportunity to meet new people
2. Social activities offered
3. Provides an opportunity to meet people with common interests

C. MALE NON-PARTICIPANTS - TABLE

The male non-participants felt that student organizations provided no academic benefits. Also, many students commute and work part-time. The three main reasons, in order, for not participating were:

1. Do not feel that participation is beneficial to my academic endeavor
2. Lack interest in belonging to a student organization
3. Work part-time

D. FEMALE NON-PARTICIPANTS - TABLE

The female respondents felt it was more beneficial to devote their time for studying rather than participating in club activities. A large number of the female respondents selected "Other" because they were married or divorced with children. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Other
3. Do not feel that participation is beneficial to my academic endeavor

E. MEN'S RECREATION

The male respondents surveyed felt that most students had the opportunity to participate. However, they disagreed that a diversified recreation program was available and that adequate facilities were provided.

It was apparent the the male students would like to participate in the following programs:

1. Archery
2. Flag or Touch Football
3. Rifle
4. Softball
5. Golf
6. Tennis
7. Wrestling

F. WOMEN'S RECREATION

Among the female respondents, it was unanimous that all students had the opportunity to participate. However, there was uncertainity about the variety of programs offered and the adequacy of the facilities available for student use.

The following programs were indicated as being popular by the female respondents:

1. Archery
2. Softball
3. Tennis

II. Recommendations

The writer of this paper, using the surveys as a guide, recommends the following suggestions:

1. More social activities should be sponsored by student organizations.

2. More facilities and supervision should be provided for the intramural program.

3. Students should be better informed as to what activities are available.

4. The following intramural programs should be considered in the future expansion of the Recreation Department:

a. Archery (co-ed)
b. Rifle club, classes, or instruction (men)
c. Softball (men & women)
d. Golf (men)
e. Tennis (co-ed)

After observing the institute and discussing the over-all program with faculty and students, the writer feels the following recommmendations should be considered:

1. A check-out service should be set up in the student center. These activities could include cards, chess, checkers, footballs, softball equipment, and basketballs.

2. The school should consult a person who is well-informed in designing a softball and football field complex.

3. Tournaments should be conducted out of the student center such as 14 - 1 pool, straight ball pool, 8 - ball pool, cribbage, chess, and checkers.

4. A student organization handbook should be formulated pertaining to school policy.

5. An organization should be initiated to provide some recreational and social outlets for divorced women.

6. Recreational facilities should be provided in the vicinity of Fennimore.

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Moraine Park Technical Institute - Fond du Lac

	*Reasons for Not Belonging									
Male Non Participants	A	B	C	D	E	F	G	H	No. Survey.	Want Club
Accounting	23	9	1	14	15	9	14	11	17	
Auto Mechanics	15		5	10	11	11	11	7	12	
Electronics		5			5	1		1	2	
**Food Manufacturing	9	7		7	15	6	8	8	11	6
Marketing	42	6	2	7	24	23	16	9	23	
Mechanical Design	9		5	4	8	15	14	2	9	
Numerical Programming	5	3		5	9	3	5		5	
Power Mechanic	17			4	5	5	2	3	7	
TOTAL	122	24	10	50	92	72	77	38	76	

	*Reasons for Not Belonging									
Female Non Participants	A	B	C	D	E	F	G	H	No. Survey.	Want Club
Accounting	8		9		14	3	3	16	11	
Clerk Typist	5				6	3	2	2	3	
Data Processing	3		2	2	6				3	
**Food Manufacturing - Dairy	2								1	1
Marketing			1	2	6	2		1	2	
Practical Nursing		4	4	4					2	
Secretarial Science	17		3	2	12	9	13	19	14	
**Ward Clerk	9	2			7	4	1	19	7	6
TOTAL	42	6	15	8	51	19	19	56	43	

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

**No club presently exists in my area of training

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Moraine Park Technical Institute - Fond du Lac

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	4	8		3	5		4		4
Auto Mechanics	22	25	22	15	36	8	20	5	26
Data Processing	2	1	6	1		2			2
Electronics	16	11	3	4	14	7	13	4	12
Food Manufacturing	3				2			1	1
Marketing	16	22	24	25	25	3	8	8	22
Mechanical Design	9	6	27	26	22	4	1		16
Power Mechanics	18	7	5	4	7	1	2		7
Production	2				3	1			1
TOTAL	92	81	87	72	112	26	48	17	71

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	5	6	13	8	3		1		7
Clerk Typist	1	3		2					2
Data Processing	1			2	3				1
Marketing		4	4	4	6				3
Mechanical Design			3		2		1		1
Practical Nursing	13	20	33	7	35	4		7	28
Secretarial Science - Med.	5	12	15	28	13	6	4		13
TOTAL	25	45	68	41	62	4	6	7	54

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

Moraine Park Technical Institute
Fond du Lac, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

		Agree	Disagree	Uncertain
A.	All students have the opportunity to participate	130/64.04%	43/21.18%	30/14.78%
B.	Presently, the intramural program offers a variety of activities	33/16.42%	98/48.76%	70/34.83%
C.	Adequate facilities and supervision are provided	54/26.86%	93/46.22%	54/26.86%
D.	Inter-school competition tends to de-emphasize the importance of intramurals	54/16.42%	112/55.72%	56/27.86%

Please check any intramural program that is presently non-existant in which you would like to be a participant.

32	Archery	36	Skiing	27	Handball
42	Basketball	67	Softball	5	Lacrosse
13	Fencing	25	Swimming & Diving	13	Soccer
63	Football	31	Track & Field	5	Squash
26	Hiking	38	Baseball	14	Tennis
23	Ice Hockey	30	Bowling	2	Volleyball
62	Rifle	4	Cross Country	47	Wrestling
4	Rugby	8	Golf	12	Water Polo
				4	Other

1. Judo - 2
2. Racquetball - 2

Moraine Park Technical Institute
Fond du Lac, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	63 / 66.23%	18 / 18.44%	14 / 14.74%
B. Presently, the intramural program offers a variety of activities	30 / 31.58%	19 / 20.00%	46 / 48.42%
C. Adequate facilities and supervision are provided	35 / 36.84%	25 / 26.51%	35 / 36.84%
D. Inter-school competition tends to de-emphasize the importance of intramurals	12 / 12.63%	34 / 35.79%	49 / 51.58%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

10	Archery	23	Skiing	1	Handball
1	Basketball	8	Softball	1	Lacrosse
1	Fencing	21	Swimming & Diving	2	Soccer
2	Football	1	Track & Field	0	Squash
5	Hiking	4	Baseball	19	Tennis
1	Ice Hockey	8	Bowling	1	Volleyball
4	Rifle	0	Cross Country	0	Wrestling
1	Rugby	2	Golf	2	Water Polo
				5	Other

1. Judo - 3
2. Water-skiing - 1
3. Horseback Riding - 1

Moraine Park Technical Institute
Fond du Lac, Wisconsin

Comments on Student Activities Survey

Comments were as follows:

Intramural program is in poor shape and is not a very good recruiting device for new students

More advanced publicity needed for bowling tryouts

Would like to see a trap and skeet team--felt the competition would be unlimited in this area

Could not participate in any activities because they take place after school hours

Would like to go on school skiing trips

Felt student activities and clubs are a waste of time

Need more student participation--didn't know if it was the student's fault or the program itself

An intramural program in the major sport areas would be welcomed and most beneficial to the school

Felt we should have more intramural sport activities such as first year students verses second year students; marketing students verses mechnical technology students; and teachers verses students

A larger sports program

Would like to see basketball or football between different classes

Get inner classes to play games of basketball, softball, and football

Like to see games played between clubs

Like to see a wrestling intramural program

Like to see a rifle, baseball, and judo team

Would like to see more exchange of different students in classes--not the same ones day after day

Sports program could be more complete

Doesn't see why an $8 fee has to be paid at the beginning of the year and again at midterm--didn't feel the school newspaper was worth it

FOND DU LAC TECHNICAL INSTITUTE
Fond du Lac, Wisconsin

I. Interpretation of Surveys

A. MALE PARTICIPANTS - TABLE

The main reason the male students participated in club activities was because of the social benefits derived from the club. Also, they felt that membership would be beneficial to their academic education. The four main reasons, in order, for participating were:

1. Provides an opportunity to meet people with common interests
2. Social activities offered
3. Beneficial to my academic endeavor
4. Provides an opportunity to meet new people

B. FEMALE CLUB PARTICIPANTS - TABLE

A majority of the female participants, unlike the males, participated for academic reasons. Another reason was the opportunity to simply meet other people. However, it should be noted that social activities such as parties, dances, etc., did not seem important. The three main reasons, in order, for participating were:

1. Educational benefits received
2. Opportunity to meet people with common interests
3. Opportunity to meet new people

C. MALE NON-PARTICIPANTS - TABLE

The male non-participants overwhelmingly felt that a lack of time to devote to club activities was the main reason for not joining a student organization. The three main reasons, in order, for not participating were:

1. Work part-time
2. Need time for studies
3. Lack interest in belonging and do not feel it is beneficial to my education

D. FEMALE NON-PARTICIPANTS - TABLE

The survey instrument for measuring the female non-participants was inadequate since the main reason given was "Other". However, the writer feels that many of the respondents in this category were either working part-time, married or divorced with children. The top three responses, in order, for not participating were:

1. Other
2. Need time for studies
3. Work part-time

E. MEN'S RECREATION

The male respondents slightly agreed that all students have the opportunity to participate in recreational activities. However, a majority agreed that the programs were limited and that there were not enough facilities available for student use.

It was apparent that male students would like to participate in the following recreational programs:

1. Archery
2. Basketball
3. Football
4. Hiking
5. Rifle
6. Skiing
7. Softball
8. Track & Field
9. Wrestling

F. WOMEN'S RECREATION

The female respondents also agreed that all students have the opportunity to participate in recreational activities. However, uncertainity existed in their opinion towards the programs offered and the adequacy of the facilities available.

The females felt the following programs should be initiated:

1. Archery
2. Skiing
3. Swimming
4. Tennis

II. Recommendations

The writer of this paper, using the surveys as a guide, recommends the following suggestions:

1. A club in Food Manufacturing and Ward Clerk area should be initiated.

2. Social activities, especially in the Trade and Industrial areas, should become an integral part of the clubs.

3. The following intramural programs should be considered in the future expansion of the Recreation Department:

   a. Archery (co-ed)
   b. Bsketball (men)
   c. Flag or Touch Football (men)
   d. Rifle (men)
   e. Skiing or Ski Club (co-ed)
   f. Softball (men)
   g. Tennis (co-ed)
   h. Wrestling (men)

4. More facilities and organized programs should be made available to male and female students.

From observations of Moraine Park and interviews with faculty and students, the writer feels the following recommendations should be considered:

1. Some working relationship between the University of Wisconsin - Fond du Lac Campus and Moraine Park be established. Maybe one person could coordinate a recreation program between both schools.

2. School policy and guidelines should be established in writing for student organizations.

3. An intramural program should be developed among departments, clubs, and independent groups.

Northeast Wisconsin Technical Institute
Green Bay, Wisconsin

ACTIVITIES QUESTIONNAIRE

Total Sample: 343

Each year a twelve dollar activity fee has been collected from all registering students. This fee is used to fund a number of student functions at NWTI. We, the student government, feel the students should have more to say about how their money is spent. For this reason we have come to you for advice. Some information that may help you make your decision on the questions is as follows: (1) there is a good chance that we will be occupying the new building two miles west of Military on West Mason, (2) there will be no facilities for indoor sports, no gym or pool, and (3) facilities can be located and rented if enough interest is shown.

1. How many basketball games have you attended this year?

Zero:	One:	Two:	More:	No Response:
299	20	8	14	2
87%	6%	2%	4%	1%

2. Considering the number of people that attend the games and the fact that $1,300 was budgeted to cover the coache's salary, uniforms, transportation, etc., should we continue to fund the Mariners?

Yes:	No:	No Response:
144	181	18
42%	53%	5%

3. $500 is annually put aside to pay for the all-school chorus. Included in the expenses are director's salary, robes, and music. Should we continue to finance the chorus?

Yes:	No:	No Response:
108	221	14
31%	64%	5%

4. The NWTI TODAY news sheet was discontinued because we had no funds allotted for it, and we also lacked students who would donate the amount of time necessary to produce the paper?

   (a) Should we finance the NWTI TODAY?

Yes:	No:	No Response:
260	77	6
76%	22%	2%

   (b) Would you be willing to work on the staff? If so,
   Name_____
   Address_____
   Phone_____

5. $2,175 is allotted to the TECH TIMES.

   (a) Should we fund the TECH TIMES?

Yes:	No:	No Response:
144	192	7
42%	56%	2%

6. $2,175 was budgeted to partially finance our yearbook; the students who buy copies pay the remaining amount needed to buy the books from the printer.

   (a) Should the system remain as it is?

Yes:	No:	No Response:
175	133	36
51%	39%	10%

   (b) Should Student Government pay the full price and give free copies to all students?

Yes:	No:	No Response:
97	196	50
28%	57%	15%

   (c) Should we even have a yearbook?

Yes:	No:	No Response:
231	80	32
67%	23%	10%

7. Intramurals are financed through your activity fee at an annual budget amount of $900.

   (a) Have you been involved in the intramural program?

Yes:	No:	No Response:
48	293	2
14%	85%	1%

   (b) Would you like to see intramurals continued?

Yes:	No:	No Response:
231	75	37
67%	22%	11%

   (c) If yes, which ones of the following would you take part in?

Broomball	28	Football	78
Volleyball	141	Basketball	97
Bowling	116	All City Basketball	45
Track	37		

Others Golf, Tennis, Baseball, Hockey, Swimming

8. The Wisconsin Technical College Conference is made up of Technical schools such as ours for the purpose of athletic competition. Should we join the conference?

Yes:	No:	No Response:
191	111	41
56%	32%	12%

Which of the following would you participate in?

Basketball	85	Volleyball	81
Softball	56	Touch Football	58
Bowling	77	Golf	29
Swimming	47		

Northeast Wisconsin Technical Institute
Green Bay, Wisconsin

I. INTERPRETATION OF SURVEY

A. STUDENT ORGANIZATIONS

Northeast Technical Institute is a new institution that began operation on October 1, 1971. Therefore, many of its programs are in the infancy stage. Student organizations that currently exist are:

Circle K	17
Credit Club	55
Student Senate	
Vets Club	14
Wisconsin Office Education Association	54

B. RECREATION

Intramural sports are offered at Northeast Wisconsin Technical Institute on a limited basis. Again, like other similiar institutions, a lack of facilities is the main problem. The following recreational activities are offered on an intramural basis:

Men	Co-ed
Basketball	Bowling
Football	Swimming
	Volleyball

The Student Services Department is currently trying to create a more extensive program for the 1972-73 academic year.

C. SURVEYS

The enclosed questionnaire was distributed to the student body during the 1971-72 school year. The following statements, pertaining to student activities, may be concluded:

1. Students that attend organized inter-collegiate basketball games constitute a small fraction of the student body. However, approximately fifty percent of the non-attending students still favor sponsoring an inter-collegiate team.

2. Students tend to feel that the school chorus should not be financed by activity fee funds.

3. Students agreed that the NWTI TODAY news sheet was beneficial but showed uncertainity in financing the student newspaper, TECH TIMES.

4. Students agreed that it is desirable to have a yearbook but felt that the students should share the burden of the expenses.

5. While a dismal percent of the student body was involved in intramurals, a significant number indicated they would like to participate next year.

II. RECOMMENDATIONS

The writer, based on written materials, suggests that the following recommendations be considered:

1. The constitution of the Student Government should be revised and updated. The changes might be the following:

   a. Add a method of impeachment of members that is not detrimental to the goals of the government

   b. Revise the method for adopting or changing an amendment. It appears that such a stringent policy is used to discourage amendment action of the student representative group.

   c. The discrimination between one-year and two-year students is debatable. The fact remains that each student pays the same activity fee and, therefore, is entitled to equal rights.

2. The school should continue the publication of the NWTI TODAY news sheet during the 1972-73 school year.

3. The intramural program should be re-examined. There is a discrepancy between the students involved and the ones interested in participating.

4. Someone should be appointed to organize the intramural program at NWTI. Whenever the Student Government is given this responsibility, it becomes evident that they lack the contacts, knowledge, and ability to set up a successful program.

5. The survey on intramural activities should be more comprehensive. For example, it should include times, days, and a list of all the programs that could be offered.

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Janesville Vocational and Technical School

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Auto Body	3	7	22	1	10	3	9		9
Marketing	4	4	6	13	4	2			6
TOTAL	7	11	28	14	14	5	9		15

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Bus. Admin. - Acctg.		1	2	3					1
Clerk Typist				3				2	2
Marketing - Fashion	1	11	18	12	6				8
TOTAL	1	12	20	18	6			2	11

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Janesville Vocational and Technical School

Male Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	3		2			1	3			2
Auto Body	19	7	3	4	12	10	13	10	5	13
Drafting	17	2	7	2	5	3		7	4	8
Machine Tool	9	4			9	10	7	5	3	8
Marketing	21	4	12	1	14	8	8	9	3	13
TOTAL	69	17	24	7	40	32	31	31	15	44

Female Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting Clerk	3				2			1		1
Clerk Typist	11	6	6	5	23	5	12	1	2	13
Clerk Typist - Medical	18	7	4		24	9	11	8	3	14
Fashion Merchandising	2		3	1	8		3	3	2	4
Secretarial Procedures								2		1
TOTAL	34	13	13	6	57	14	26	15	7	33

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

Janesville Vocational and Technical School
Janesville, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Men Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	21 51.20%	7 17.10%	13 31.70%
B. Presently, the intramural program offers a variety of activities	4 9.80%	24 58.50%	13 31.70%
C. Adequate facilities and supervision are provided	3 7.30%	17 41.50%	21 51.20%
D. Inter-school competition tends to de-emphasize the importance of intramurals	5 12.50%	17 42.50%	18 45.00%

Men Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	11 55.00%	5 25.00%	4 20.00%
B. Presently, the intramural program offers a variety of activities	2 10.00%	13 65.00%	5 25.00%
C. Adequate facilities and supervision are provided	1 5.00%	14 70.00%	5 25.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	2 10.50%	7 36.90%	10 52.6%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

13	Archery	12	Skiing	14	Handball
7	Basketball	16	Softball	4	Lacrosse
12	Fencing	19	Swimming & Diving	14	Soccer
15	Football	9	Track & Field	5	Squash
11	Hiking	19	Baseball	11	Tennis
5	Ice Hockey	22	Bowling	18	Volleyball
21	Rifle	5	Cross Country	17	Wrestling
1	Rugby	11	Golf	9	Water Polo

Other: Card Tables, Drag Racing, Fishing, Karate, Photography, and Surfing

Janesville Vocational and Technical School
Janesville, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Women Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	2 25.00%	6 75.00%	
B. Presently, the intramural program offers a variety of activities	1 12.50%	7 87.50%	
C. Adequate facilities and supervision are provided	1 12.50%	7 87.50%	
D. Inter-school competition tends to de-emphasize the importance of intramurals	2 40.00%	3 60.00%	

Women Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	13 46.40%	4 14.30%	11 39.30%
B. Presently, the intramural program offers a variety of activities	4 14.80%	5 18.50%	18 66.70%
C. Adequate facilities and supervision are provided	3 10.70%	9 32.10%	16 57.20%
D. Inter-school competition tends to de-emphasize the importance of intramurals	1 3.60%	7 25.00%	20 71.40%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

3 Archery	6 Skiing	1 Handball
1 Basketball	2 Softball	____ Lacrosse
2 Fencing	5 Swimming & Diving	____ Soccer
____ Football	1 Track & Field	____ Squash
____ Hiking	____ Baseball	7 Tennis
____ Ice Hockey	12 Bowling	____ Volleyball
____ Rifle	____ Cross Country	8 Wrestling
____ Rugby	4 Golf	____ Water Polo

Other: Badminton and Judo

Janesville Vocational and Technical School
Janesville, Wisconsin

STUDENT RESPONSES

Comments were as follows:

No student interest

Women are slighted

Until given survey, was unaware of student organization

Extra responsibilities at home

Have children at home

Student feels that a drama club would benefit the schhol

Drive too far

Belong to other organizations in the community

Go home on weekends

Likes to have an idea of how school is run and likes to have a right to express opinion

Doesn't consider school capable in organizing anything since everything takes so much red tape.

Lack of time

School should be run by students instead of the teachers.

School and town isn't build for students under 21

Transportation

School doesn't offer anything

Organizations provide leadership and knowledge

Students tend to be all for something (clubs, sports, etc.), but after it is started, they show little or no interest.

Feels administration should sponsor some activities instead of leaving the cost to the student government.

Program no good at all

Live out of town

Disagree with $5 activity fee; shouldn't be any sport programs at all

Student programs alright for people in school just for fun or just using time they have to spare

Feels school activities are complete waste of time. Very bitter about having to contribute $5 for which nothing is received

No one but "social butterflies" taking cream puff courses would have time for them

Blackhawk Technical Institute
Janesville, Wisconsin

I. Interpretation of Survey

A. MALE PARTICIPANTS - TABLE

The main reason the male students participated in student organizations was academic in nature. However, the social activities were considered important. The three main reasons, in order, for participating in club activities were:

1. It is beneficial to my academic endeavor
2. Credientials are acquired that will be beneficial to obtaining post-graduate employment
3. Provides an opportunity to meet people with common interests.

B. FEMALE PARTICIPANTS - TABLE

The female respondents, like the males, felt that academic benefits received was the main reason for joining a student organization. The three main reasons, in order, were:

1. It is beneficial to my academic endeavor
2. Credientials are acquired that will be beneficial to obtaining post-graduate employment
3. Provides an opportunity to meet with new people

C. MALE NON PARTICIPANTS - TABLE

The male respondents overwhelmingly felt a lack of time was the main reason for not participating. The three main reasons, in order, for not participating were:

1. Work part-time
2. Need time for studies
3. Do not feel participating is beneficial to my education

D. FEMALE NON PARTICIPANTS - TABLE

The female students, like the males, felt a lack of time was the main reason for not participating in student organizations. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Work part-time
3. Lack interest in belonging to any student organization

E. MEN'S RECREATION SURVEY - PARTICIPANT

The male participants strongly agreed that a lack of diversification existed in the recreation program. Also, a great deal of uncertainity existed in the feeling that all students may participate and that adequate supervision and facilities are provided.

F. MEN'S RECREATION SURVEY - NON-PARTICIPANT

The male non participants overwhelmingly agreed that the present recreation program lacks a variety of programs and that the facilities and supervision was inadequate. Also, a great deal of uncertainity existed that all students have the opportunity to participate.

Interest in participating existed in the following recreational programs:

1. Archery
2. Bowling
3. Rifle
4. Softball
5. Volleyball
6. Wrestling

G. WOMEN'S RECREATION SURVEY - PARTICIPANT

The female participants strongly disagreed with the following statements:

1. All students have the opportunity to participate
2. The intramural program is well diversified
e. Adequate facilities and supervision are provided

H. WOMEN'S RECREATION SURVEY - NON PARTICIPANT

The female non participants, as one might expect, showed a great deal of uncertainity in all statements given. This is probably due to a lack of interest in the program.

The following programs were indicated by female respondents as being a desirable part of the program:

1. Bowling
2. Tennis
3. Skiing
4. Wrestling

II. Recommendations

The writer of this paper, using the survey instrument as a guide, suggests the following:

1. A Trade & Industrial Club should be initiated.

2. More facilities, programs, and supervision should be included in the recreation program.

3. The following programs should be considered in the future planning of the recreation program:

   a. Archery (Co-ed)
   b. Bowling (Co-ed)
   c. Fencing (Men)
   d. Rifle (Men)
   e. Skiing (Co-ed)
   f. Swimming (Co-ed)
   g. Tennis (Co-ed)
   h. Volleyball (Co-ed)
   i. Wrestling (Men & Women)

The writer of this paper, based on observations, feels that activities will continue to be undernourished unless the schools combine. Presently, there is a campus at Janesville and one at Beloit. Surely, the arranging of facilities, communications, etc., must be a troublesome task. However, the following might be done:

1. Attempt to coordinate a small recreation program for each branch school.

2. Programs should be initiated that would be on the co-ed basis.

3. A tournament should be set up at the close of the league season that would include both branch schools.

WTAE District 6

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June 1, 1972

Mr. Jim Seversen
Student Activities Director
District #1 Technical Institute
Eau Claire, WI 54701

Dear Jim:

Let me apologize for neglecting this letter for so long. However, I previously explained the situation involving completion of surveys and questionnaires has been demanding this year. Therefore, after discussing your questionnaire with Mr. Sather and appropriate personnel which would be involved it was decided that completing yours was not possible.

Not only the previous demands, but instructional time lost through general education courses, where most surveys-questionnaires are completed, was too great, and an internal problem involving a district surveying of students prevailed. Our size does prohibit us from getting to the majority. In a recent survey taken only 22% of our students were reached. So . . . . this I feel explains our situation.

May you proceed without us and I wish you success and luck while completing your studies.

Sincerely yours,

Warren W. Greco
Counselor

jd

Kenosha Technical Institute
Kenosha, Wisconsin

I. Interpretation of Survey

A. STUDENT ORGANIZATIONS

The student organizations at Kenosha Technical Institute are orientated to serve the social, academic, and interest needs of the students. Presently, the organizations consist of fraternities, sororities, community orientated clubs, and academic student organizations. These organizations include:

Airframe and Powerplant Technicians Club
Alpha Beta Hortus Society (Horticulture)
Alpha Eta Rho Fraternity (Aviation Programs)
Alpha Nu Beta Fraternity (open frat)
Alpha Theta Epsilon Sorority (open
Automotive Club of KTI
Aviation Club of KTI
Aviation Mid-Management Organization
Cheerleaders Club
Chi Omega Phi (Law Enforcement)
DECA
Dental Assistants Club
Fluid Power Society
Future Data Processers
Industrial Diploma Club of KTI
Iota Delta Kappa (Interior Design)
Library Technical Assistants Club
Medical Assistants Club of KTI
Operating Room Assistants Club of KTI
Practical Nurses Club Jan. & Sept.
Publications Club (Big Six)
Ski Club of KTI
Society of Manufacturing Engineers
Wisconsin Trade & Industry Assoc. of KTI
WOEA

Mr. Warren Greco, Counselor, is currently supervising all Student Senate and organizational activities. During the 1971 - 72 year the following activities were conducted through club projects:

Sadie Hawkins Dance
Christmas Dance
Winter Carnival
Other Dances
Get-acquainted Fall Picnic
Road Rally

Christmas Tree Decorating Contest
Christmas Parties
Graduation Banquet
Hayride
Homecoming (Basketball)
Beer Parties
Employer & Employee Banquet
DECA Week
WOEA Week
National & Regional Flying Competition
Club Field Trips
Snowskiing Trips
Christmas Carroling
Thanksgiving Volunteer Project
Food Basket Project
Vietnam Volunteer Project
Red Cross Activities
Program-Employer Visits
Dinner-Dances (Businessman's Banquet)
Guest Speakers
Miss Law Enforcement Contest
Inter-school Modified Auto Construction & Pacing
Nursing Home "Cheer-Up"
Tour Guides
Movies

It should be pointed out that top names in the entertainment business, such as Duke Ellington, perform at social and cultural events. Also, top name movies have been shown through the sponsorship of the Student Senate. These include: Billy Jack, Klute, Bonnie & Clyde, etc.

B. RECREATION

The recreation program, headed by Mr. Greco, offers a diversified program in which all students are invited to participate. These programs, except for basketball, cross-country, and wrestling, are offered strictly on an intramural basis. These include:

Men		Women
Basketball	Softball	Bowling
Bowling	Soccer	Golf
Conditioning	Swimming	Ice Skating
Cross Country	Wrestling	Skiing
Football		Softball
Golf		Swimming
Ice Skating		Tennis
Skiing		

Like a majority of vocational-technical institutes, a lack of gym facilities constitutes a major problem. However, KTI has plans of building their own facility within the next two school years.

II. Recommendations

The writer of this paper, using observations and discussions with students as a guide, suggests that the following recommendations be considered:

1. The school should provide a larger auditorium when showing movies. Also, these movies should be shown during after-school hours since they normally last more than one hour.

2. All recreational activities should be properly scheduled and supervised.

3. Establishment of some written guidelines that will be used for all recreation and intramural activities. This should include: scheduling, rules and regulations, entry dates, injury policies, etc.

4. The policy of 25% ($5,000) of the activity fee money being used for the administration of student organization recordkeeping should be re-examined.

WESTERN WISCONSIN TECHNICAL INSTITUTE
6th and Vine Streets
LA CROSSE, WISCONSIN
54601

CHARLES G. RICHARDSON
District Director

May 30, 1972

Mr. Jim Severson
Director Student Activities
District One Technical Institute
620 West Clairemont Avenue
Eau Claire, Wisconsin 54701

Dear Jim:

Just a note regrading the Student Activities Survey. Bad news, our prerequisition was cancelled at the last minute so I wasn't able to get the survey out to returning students.

I tried to get them out at graduation but ran into problems and had a very small return.

Meanwhile, I still have about 2000 blank surveys and about 50 completed ones. I didn't have too much time to get them out since I didn't receive them from Lynn until late last week.

Please adivse me on the status of the blank surveys.

I won't be back in town until about July 5, but will try to get in touch with you then. Will tell you about my trip.

Sincerely,

Richard Hoeft

Richard Hoeft
Student Activities

RH:mh

Western Wisconsin Technical Institute
LaCrosse, Wisconsin

I. SCHOOL ORGANIZATIONS & RECREATIONAL PROGRAMS

A. STUDENT ORGANIZATIONS

Western Wisconsin Technical Institute is one of the more progressive schools in Wisconsin in their attitude towards student organizations. Presently, it is the only technical institute, under 2,000 students, that offers the student an opportunity to belong to fraternaties, sororities, and community orientated organizations. The following organizations were active during the 1971-72 year:

Organization	Membership
Accounting	25
Agri-Business	35
Air Conditioning & Refrigeration	16
Alpha Sigma Beta Fraternity	30
Art Club	25
Band	25
Business Club	90
Chi Sigme Chi Sorority	35
Choir	16
Circle K	20
Data Processing	15
Drafting	10
Drama	30
DECA	30
Delta Gamma Phi Sorority	25
Forensics	10
Health Occupations	40
Inter Greek Council	15
Mechanical Design	10
Newspaper	15
Outdoor Club	35
Photo Club	8
Pom-Pom	20
Secretarial	40
Student Congress	30
T & I Club	
Tau IOTA Upsilon Fraternity	35
Vets Club	30

Mr. Dick Hoeft, Activities Director, is in charge of student organization activities. During the past three years he has developed the following:

1. In-service training session for student organization officers.
2. A well-written handbook for student organizational activities.
3. Direct relationship with the University of Wisconsin - LaCrosse in which they send him a field worker to organize student activities.

B. RECREATION

Western Tech has purchased the old Y.M.C.A. to house students and run extensive recreation programs. They presently offer the following recreational activities:

Men	Women	Co-ed
Basketball	Golf	Bowling
Curling	Handball	Swimming
Golf	Track	Tennis
Handball		
Softball		
Track		
Tumbling		

Mr. Hoeft is presently in charge of these activities. Also, he uses work-study personnel and officials from the University of Wisconsin - LaCrosse to carry out the program.

II. RECOMMENDATIONS

The writer of this paper, based on observations, recommends that the following suggestions be considered:

1. WWTI purchase their own equipment that isused in the recreation center.
2. Tournaments should be conducted from the student center such as:
    a. Checkers
    b. Chess
    c. Ping Pong
        1. 8 - Ball
        2. 14 - 1 Ball
        3. Straight Ball

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STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Madison Area Technical College

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	7	7	8			2			4
Animal Techniques	3		2	1					1
Data Processing	2	3	4	9					3
Food Preparation	8			3	4		3		3
Liberal Studies	4	3	6	2	2			3	4
Marketing	2	3	3	3	1				2
Office Mid-Man		2	3		1				1
Police Science	2		10	4	3		1		4
TOTAL	28	18	36	22	11	2	4	3	22

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Animal Techniques	25	3	16	11	12	10			13
Comm. Art	2	1	6		5		2	1	3
Data Processing	4	2	2	4					2
Dental Hygiene	5	9	16	4	8				7
Fashion Merchandising	1	5	6	2	1			1	3
Liberal Studies		1			2			3	1
Practical Nurse	5	2	2	2	1				2
Secretarial Science	3	2			1				1
TOTAL	45	25	48	23	30	10	2	5	32

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Madison Area Technical College

Male Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	8				6					3
Barbering	2			5	2	1	2	2		3
Bio-chemistry					1	3	2			1
Business & Bus. Machines	3					3	2	1		2
Communication Art	5	1	2	2	9	2	5	2		5
Data Processing	13	2	6	1	9		3	3		7
Fire Science		1	1		3	4		3		1
General Studies	2	1	2	4	3	1	5	6		4
Police Science				1		3	2			2
Real Estate	4	1		3	5	3	4	4	3	4
TOTAL	37	6	11	16	38	21	27	21	3	32

Female Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Account Clerk					3	1	2			1
Business Machines	12	3		4	7	2	7	3	4	8
Clerk Typist			1		3		2			1
Medical Assistant	4	2		13	8	5	2	5	5	7
Secretarial Science	3			2	8	2	3	2		4
Therapy				2	6	3	1		2	2
Uphostolery		3			2			1		1
TOTAL	19	8	1	21	37	13	17	11	11	24

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Male Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	14/64.00%	5/23.00%	3/13.00%
B. The intramural program is well diversified	13/59.00%	5/23.00%	4/18.00%
C. Programs presently offered are well diversified	12/54.00%	5/23.00%	5/23.00%
D. Adequate facilities and supervision are provided	11/50.00%	8/37.00%	3/13.00%
E. Inter-school competition tends to de-emphasize the importance of intramurals	9/41.00%	4/18.00%	9/41.00%

Male Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	46/60.00%	12/16.00%	19/24.00%
B. The intramural program is well diversified	22/28.00%	14/18.00%	42/54.00%
C. Programs presently offered are well diversified	21/28.00%	16/21.00%	39/51.00%
D. Adequate facilities and supervision are provided	24/32.00%	13/17.00%	38/51.00%
E. Inter-school competition tends to de-emphasize the importance of intramurals	24/32.00%	28/38.00%	22/30.00%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

7	Archery	25	Skiing	17	Handball
7	Basketball	5	Softball	3	Lacrosse
11	Fencing	22	Swimming & Diving	8	Soccer
12	Football	6	Track & Field	9	Squash
9	Hiking	6	Baseball	8	Tennis
10	Ice Hockey	7	Bowling		Wrestling
20	Rifle		Cross Country	12	Water Polo
10	Rugby	8	Golf		

Other: Badminton, Drum & Bugle Corp., Horseback Riding, Logrolling, Motorcycling, Mountain Climbing, Piloting, Ping Pong, Roller Derby, Sailing, & Volleyball

Madison Area Technical College
Madison, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Female Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	25/81.00%	1/3.00%	5/16.00%
B. The intramural program is well diversified	15/45.00%	8/26.00%	8/26.00%
C. Programs presently offered are well diversified	16/55.00%	6/21.00%	7/24.00%
D. Adequate facilities and supervision are provided	17/57.00%	4/13.00%	9/30.00%
E. Inter-school competition tends to de-emphasize the importance of intramurals	10/38.00%	12/46.00%	4/16.00%

Female Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	31/57.00%	12/22.00%	11/21.00%
B. The intramural program is well diversified	16/29.00%	13/23.00%	25/48.00%
C. Programs presently offered are well diversified	15/28.00%	13/24.00%	27/48.00%
D. Adequate facilities and supervision are provided	16/29.00%	8/15.00%	31/56.00%
E. Inter-school competition tends to de-emphasize the importance of intramurals	9/18.00%	16/31.00%	26/51.00%

Please check any intramural program that is presently non-existent in which you whould like to be a participant.

21	Archery	20	Skiing	6	Handball
3	Basketball	6	Softball	4	Lacrosse
14	Fencing	24	Swimming & Diving	3	Soccer
4	Football	5	Track & Field	5	Squash
15	Hiking	1	Baseball	19	Tennis
3	Ice Hockey	14	Bowling	1	Wrestling
6	Rifle	1	Cross Country	7	Water Polo
4	Rugby	10	Golf		

Other: Badminton, Gymnastics, Horseback Riding, & Sailing

Madison Area Technical College
Madison, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Don't have interest in sports activities, don't believe we should have to pay for an activity fee

Help improve opportunities for students

Student activities are fine because it gives you a chance to get some exercise with the intramural program

For the students who commutes, there is the problem of rides

As far as students are concerned, many like to go home after their classes

The intramurals are more for the students in liberal studies who aren't at the present time working on a particular profession

Enjoy the picnics and dances; an opportunity to meet other students

Gives an opportunity to help fellow students obtain what they want and what is needed

Survey would have been more effective if person handing them out would have explained it or at least asked students to fill them out

Involved with work study and outside job, participating in student activities is limited

Better peers by giving a say in student government

Would have joined if I had heard more about it

Children

Couldn't care less

More dances during school year

Too busy

Women need organizing

Nothing good enough

Older student

Not enough information given in beginning of year

Would like more personal contact with representatives so we would be able to join and participate in things

Lack of contact with student body

Request that a grievance board be instituted in this school without outside participation unless approval by both parties agree

Not interesting

Teachers encouragement

School has a fine activity list for its size

Too much like high school

They are no good

Would enjoy more rock concerts, preferably in the winter months

Work full time

All time occupied

Programs other than general studies don't get much chance for sports

Need time for art

Could use a good swimming and diving intramural program with competition with other schools

Not enough refreshments

The institution is a tool to obtain knowledge. It's emphasizes should be towards mental awareness rather than physical activity.

Wish they had a football team

Too childish

Co-ed sports

Didn't think student senate had any right to raise student activity fee. Representatives never said anything to the students.

Activities offered are poor

Total waste of time

Student organizations have very little control over their own activities. Students should have more control

Madison Area Technical Institute
Madison, Wisconsin

I. INTERPRETATION OF SURVEY

A. MALE PARTICIPANTS - TABLE

The main reason the male respondents participated in student organizations was the academic benefits derived from participating. However, the social benefits acquired was indicated as another determining factor for participating. The three main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Social activities that are offered (parties, dances, etc.)
3. Credientials are acquired that are beneficial to obtaining post-graduate employment

B. FEMALE PARTICIPANTS - TABLE

The female respondents, like the males, indicated that academic and social motives were the main incentives for belonging to student organizations. The three main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Social activities that are offered
3. Credientials are acquired that are beneficial to obtaining post-graduate employment

C. MALE NON PARTICIPANTS - TABLE

The male non participants indicated that a lack of time was the primary reason for not joining a student organization. It should be pointed out that the column "Other" might be significantly large to invalidate the results. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Work part-time
3. Lack interest in belonging to a student organization

D. MEN'S RECREATION SURVEY - NON PARTICIPANTS

The non-participating respondents, like the participating males, slightly agreed that "all students have the opportunity to participate." Also, they

showed uncertainity and disagreement over the adequacy of the recreational facilities, supervision, and programs available for their use.

The male respondents indicated that they would like the following programs added to the recreation program:

1. Football
2. Handball
3. Ice Hockey
4. Rifle
5. Skiing
6. Swimming
7. Water Polo

E. FEMALE NON PARTICIPANTS - TABLE

The female non participants, like the males, indicated a "lack of time" was a deciding factor for not belonging to student clubs. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Enjoy other recreational activities offered during an activity period
3. Work part-time

F. MEN'S RECREATION SURVEY - PARTICIPANTS

The male participants slightly agreed that the intramural program is available for all interested students. Uncertainity and disagreement was more noticeable in the adequacy of facilities, supervision, and over-all diversity of the recreation program.

G. WOMEN'S RECREATION SURVEY - PARTICIPANTS

The female respondents overwhelmingly agreed that all students have the opportunity to participate. However, there was only slight agreement that adequate programs, facilities, and supervision is provided for recreational activities.

H. WOMEN'S RECREATION SURVEY - NON PARTICIPANTS

The non-participating females, unlike the participants, only slightly agreed that all students are afforded the opportunity to participate. There was a great

deal of uncertainity and disagreement over the adequacy of programs offered, facilities available, and supervision of programs by the recreation department.

It was obvious that the female respondents felt the following programs should be initiated:

1. Archery
2. Hiking
3. Skiing
4. Swimming
5. Tennis

II. RECOMMENDATIONS

The writer of this survey, using the surveys as a guide, suggests the following recommendations:

1. A Medical Assistance, Real Estate, and Business Machines Club might be initiated.

2. The following recreation programs should be annexed to the recreation department:

   a. Archery (Co-ed)
   b. Football - Flag (Men)
   c. Rifle (Co-ed)
   d. Skiing (Co-ed
   e. Swimming (Co-ed)
   f. Tennis (Co-ed)
   g. Water Polo (Co-ed)

The writer, based on observations and informal discussions with students, suggests that the following recommendations be considered:

1. More emphasis, time, and money be allocated to the recreation program. Presently, most efforts are concentrated on inter-school activities.

2. Tournaments, such as ping pong, badminton, etc., should be conducted by the recreation department.

3. More recreation programs should be developed for women and on a co-educational basis.

4. The school should develop a more elaborate system of communications to get news out to the student pertaining to clubs and recreational programs.

5. Re-examine the publication of the student yearbook. The writer feels the book is used mainly to promote the school image.

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Milwaukee Area Technical College
Milwaukee, Wisconsin

I. INTERPRETATION OF SURVEY

A. STUDENT ORGANIZATIONS

The Milwaukee Area Technical College offers a variety of student organizational activities. The accociations include social, political, cultural, community, and academically orientated activities that aim to involve the total student body. The active groups include:

Black Student Union	20
Business Club	25
Christian Science Club	15
Data Processing	20
Fraternities	45
International Students	20
Ski Club	20
Sororities	30
Spanish Club	30
Vets Club	175

The witer, based on interviews with students, feels that the student body looks for the community for their activities. Milwaukee, being the largest city in Wisconsin, offers such a variety of activities that de-emphasis the role of the school. Also, the school is large enough to make activities too formal for students to become well acquainted.

B. RECREATION

The intramural program offers activities for both male and female students enrolled. Presently, the following intramural programs are offered:

Men	Co-ed
Basketball	Badminton
Fencing	Bowling
Gymnastics	
Soccer	

II. RECOMMENDATIONS

The writer of this paper, based on observations and interviews, feels the

following recommendations should be considered:

1. A more extensive intramural program should be organized to include co-ed and activities for women.

2. Some monies should be allocated for intramural instead of strictly on an 'inter-collegiate basis.'

3. Intramural activities should be offered to all students and not just student organizations.

4. Tournaments might be run by the student center.

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Adult Vocational & Technical Institute - Rice Lake

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	2	1			3				1
Architectural Drawing	14	26	60	46	25		3	4	23
Auto Mechanics								2	1
Data Processing	8	10	4	2	6				5
Farm Management	1	4			17	5	8	3	6
Machine Shop	2	5			5				2
Machine Tool	1	3			3	3	2		2
Machine Tool Operators	3	2			1				2
Mechanical Drafting	25	10	15	3	19	7	7		12
Merchandising	10	13	13	16	9		1		10
Welding	3	6	2		4			3	3
Wood Technics	12	23	11	15	29		4	2	13
TOTAL	81	103	105	82	121	15	25	14	80

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Account Clerk	1	3	11	7	1		1		4
Accounting	2	6	12	4	4		1		5
Architectural Drafting		1	6	9	2				3
Clerk Typist	4	8		3	1		1		3
Data Processing	11	5	2	2	1				4
Farm Management		2			3	1			1
Mechanical Drafting	2		1		3				1
Merchandising	4	6	14	8	3	4		3	7
Stenographer	13	19	11	2	13	1	1		10
TOTAL	37	50	57	35	21	6	4	3	38

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

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STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Adult Vocational & Technical Institute - Rice Lake

Male Non Participants	*Reasons for Not Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	9	4		2	6	7	5	2	6
Architectural Drawing	2			2				2	1
Auto Mechanics	7	1	15	27	9	23	20	12	19
Data Processing					3	2	1		1
Farm Management	10	4	3	4	1	8	10	2	7
Machine Tool	19	10	5	14	9	14	21	19	19
Mechanical Drafting	3	2						1	1
Merchandising	5		4	3	3	1	5	3	4
Welding	10	1	11	13	9	3	5	2	9
Wood Technics	34	10	10	10	24	16	14	5	21
TOTAL	99	32	48	75	64	74	81	48	88

Female Non Participants	*Reasons for Not Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting				6	5	4	8		4
Clerk Typist			6		2	4	2	4	3
Data Processing				2	9	4	3	6	4
Merchandising								5	1
Stenographer	3	2		1	6	5	5	12	6
TOTAL	3	2	6	9	22	17	18	27	18

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

Adult Vocational & Technical Institute
Rice Lake, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	132/68.04%	28/14.43%	34/17.54%
B. Presently, the intramural program offers a variety of activities	72/37.50%	61/31.77%	59/30.73%
C. Adequate facilities and supervision are provided	56/28.71%	102/52.30%	37/18.98%
D. Inter-school competition tends to de-emphasize the importance of intramurals	45/23.80%	93/49.20%	51/26.99%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

51	Archery	36	Skiing	29	Handball
22	Basketball	33	Softball	3	Lacrosse
13	Fencing	46	Swimming & Diving	33	Soccer
27	Football	21	Track & Field	10	Squash
16	Hiking	35	Baseball	34	Tennis
13	Ice Hockey	15	Bowling	9	Volleyball
74	Rifle	9	Cross Country	40	Wrestling
14	Rugby	19	Golf	13	Water Polo

Other (please specify):

1	Badminton	1	Horseshoe	2	Pool Tournament
1	Boxing	1	Judo	2	Snowmobiling
2	Chess	1	Kickball	1	Stock Car Races
1	Curling	1	Scuba Diving	1	Water-skiing
2	Gymnastics	4	Ping-Pong		
1	Horseback Riding	6	Pool - Billiards		

Adult Vocational & Technical Institute
Rice Lake, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	46/71.87%	11/17.18%	7/10.95%
B. Presently, the intramural program offers a variety of activities	21/32.81%	24/37.50%	19/26.69%
C. Adequate facilities and supervision are provided	22/33.33%	32/48.48%	12/18.19%
D. Inter-school competition tends to de-emphasize the importance of intramurals	19/29.68%	24/37.51%	21/32.82%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

25	Archery	14	Skiing	1	Handball
12	Basketball	9	Softball	1	Lacrosse
5	Fencing	28	Swimming & Diving	6	Soccer
2	Football	2	Track & Field	1	Squash
10	Hiking		Baseball	20	Tennis
	Ice Hockey	5	Bowling	6	Volleyball
3	Rifle	2	Cross Country	4	Wrestling
1	Rugby	2	Golf		Water Polo

Other (please specify):

1	Acrobatics	4	Band	1	Sewing
2	Art	1	Horsemanship	2	Water-skiing
1	Badminton	1	Ping-Pong		

Adult Vocational & Technical Institute
Rice Lake, Wisconsin

Comments on Student Activities Survey

Sports is needed

Schedule other nights besides Monday & Wednesday

Lack of communication to students as to what activities are open to them

Poorly equipped in club mechanics

Live too far away

More recreation facilities: pool tables, ping pong tables, etc

More student recreation facilities

Clubs organized for year-round activities, such as canoeing trips, skiing, and hiking

There is a lack of student interest and participation

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Superior Technical Institute

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting							3		2
Marketing	14	12	9	4	12			3	9
TOTAL	14	12	9	4	12		3	3	11

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	1	2	3						1
Marketing		2	6	2	1				2
TOTAL	1	4	9	2	1				3

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Superior Technical Institute

Male Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	13	9	1	6	15	3	7	3		11
Marketing	7	4		3	3	4		3		4
TOTAL	20	13	1	9	18	7	7	6		15

Female Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting		3	4		6	4	1			3
Marketing						2				1
TOTAL		3	4		6	6	1			4

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

Superior Technical Institute
Superior, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Male Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	7/76.00%	1/12.00%	1/12.00%
B. Presently, the intramural program offers a variety of activities	5/62.00%	3/38.00%	
C. Adequate facilities and supervision are provided	3/38.00%	3/38.00%	2/25.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	3/38.00%	3/38.00%	2/25.00%
Male Non Participants	**Agree**	**Disagree**	**Uncertain**
A. All students have the opportunity to participate	9/64.00%	3/22.00%	2/14.00%
B. Presently, the intramural program offers a variety of activities	5/38.00%	5/38.00%	3/24.00%
C. Adequate facilities and supervision are provided	3/38.00%	3/38.00%	2/25.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	3/38.00%	3/38.00%	2/25.00%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

2 Archery	2 Skiing	2 Handball
2 Basketball	3 Softball	Lacrosse
Fencing	2 Swimming & Diving	Soccer
3 Football	Track & Field	1 Squash
1 Hiking	3 Baseball	2 Tennis
3 Ice Hockey	8 Bowling	3 Volleyball
3 Rifle	Cross Country	Wrestling
Rugby	7 Golf	1 Water Polo

Other: Billiards

Superior Technical Institute
Superior, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Female Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	1/100%		
B. Presently, the intramural program offers a variety of activities		1/100%	
C. Adequate facilities and supervision are provided		1/100%	
D. Inter-school competition tends to de-emphasize the importance of intramurals			1 100%

Female Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	2/50.00%	1/25.00%	1/25.00%
B. Presently, the intramural program offers a variety of activities	1/25.00%	3/75.00%	
C. Adequate facilities and supervision are provided	2/50.00%	1/25.00%	1/25.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	1/25.00%	1/25.00%	2/50.00%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

2	Archery	1	Skiing		Handball
	Basketball	3	Softball		Lacrosse
1	Fencing	1	Swimming & Diving		Soccer
	Football	1	Track & Field		Squash
1	Hiking		Baseball	1	Tennis
	Ice Hockey	2	Bowling	2	Volleyball
	Rifle	1	Cross Country		Wrestling
	Rugby	1	Golf		Water Polo

Superior Technical Institute
Superior, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Does not apply to me

Married, work part-time, and lack the time needed to participate in an intramural program

Must babysit immediately after school

The organizations they have don't appeal

Rice Lake Vocational and Technical School
Rice Lake, Wisconsin

I. INTERPRETATION OF SURVEY

A. MALE PARTICIPANTS - TABLE

The male respondents participates basically to meet people. Academic motivations were also significant for participating. The three main reasons, in order, for participating were:

1. Provides an opportunity to meet people with common interests
2. It is beneficial to my academic endeavor
3. Provides an opportunity to meet new people

B. FEMALE PARTICIPANTS - TABLE

The female participants, unlike the males, indicated academic benefits was the main criteria for belonging to a student group. However, socializing did play an important role in participating. The four main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Provides an opportunity to meet new people
3. Social activities that are offered (parties, dances, etc.)
4. Credientials are required that are beneficial to obtaining post-graduate employment

C. MALE NON PARTICIPANTS - TABLE

The male respondents felt a lack of time and interest were the main reasons for not belonging to a student club. The three main reasons, in order, for not participating were:

1. Work part-time
2. Lack interest in belonging to any student organization
3. Need time for studies

D. FEMALE NON PARTICIPANT - TABLE

This survey did not adequately find the reasons why the female non participants did not join clubs. However, the writer feels that martial status played an important role why the female student does not belong to organizations.

The three main reasons, in order, for not participating were:

1. Other
2. Need time for studies
3. Lack interest in belonging to any student organizations.

E. MEN'S RECREATION SURVEY

The male students slightly agreed that all students have the opportunity to participate. However, there was uncertainity and disagreement over the diversification, facilities, and supervision provided by the recreation department.

The males indicated the following programs would be beneficial to the recreation department.

1. Archery
2. Football
3. Golf
4. Handball
5. Hiking
6. Rifle
7. Skiing
8. Soccer
9. Softball - Baseball
10. Swimming
11. Tennis
12. Wrestling

F. WOMEN'S RECREATION SURVEY

The female respondents agreed that "all students have the opportunity to participate." But uncertainity and disagreement existed in their attitudes over the availability of facilities, programs offered, and supervision of recreational activities.

The female respondents indicated the following programs as being desirable:

1. Archery
2. Hiking
3. Skiing
4. Swimming
5. Tennis

II. RECOMMENDATIONS

The writer of this paper, using the survey as a guide, suggests the following recommendations:

1. More recreations programs and facilities should be made accessible for student use.

2. Clubs should be initiated to satisfy student needs for outdoor recreation such as skiing, badminton, horseback riding hiking, etc.

3. The following intramurals should be initiated:

   a. Archery (Co-ed)
   b. Football - Flag (Men)
   c. Handball (Men)
   d. Rifle (Men)
   e. Skiing (Co-ed)
   f. Soccer (Men)
   g. Softball (Men)
   h. Swimming & Diving (Co-ed)
   i. Tennis (Co-ed)
   j. Wrestling (Men)

The writer of this paper, based on observations and visitations, suggests that the following recommendations be considered:

1. Develop written guidelines pertaining to student organizations and intramural activities.

2. Develop a plan that would pay the intramural director equitable compensation for organizing, scheduling, and supervising intramural activities.

Nicolet College and Technical Institute
Rhinelander, Wisconsin

I. INTERPRETATION OF SURVEY

A. STUDENT ORGANIZATIONS

Nicolet Community College is currently in the building stage of its year old school. Therefore, the amount of activities offered are still somewhat limited. The organizations that are currently active are:

Dramatics	25
Pep Club	15
Ski Club	45
Snowmobile Club	50
Vets Club	40

Unlike the traditional vocational-technical school, none of the organizations are academically orientated. Currently plans are being made to initiated some fraternities and sororities on campus.

B. RECREATION

The recreation program is limited due to the infancy of the school and a lack of facilities. The recreation programs are usually offered on a club and not an individual basis. Naturally, with the club enrollment down, the number of participants is also limited. Currently, the following activities are offered:

Basketball - Men
Flag Football - Men
Weight Lifting

Also, it must be mentioned that other activities are offered through the physical education classes. These include such activities as archery, golf, tennis, etc.

II. RECOMMENDATIONS

The writer of this paper, based on observations, interviews, and written literature, suggests that the following recommendations be considered:

1. The administration should establish some written guidelines pertaining to student organizations.

2. Students should be encouraged to form some academic clubs such as Auto Club, Electronics Club, etc. Basically, the student enrollment consists of the traditional vocational-technical school student.

3. Recreation programs should be orientated to fit the needs of all students. The formation of club teams eliminates many "independent" students that may want to participate.

4. All recreational leagues should have "officials" and be supervised by qualified personnel.

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

North Central Technical Institute
Wausau

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	28	20	17	22	24	4	3	3	20
Agriculture Mechanic	54	17	34	5	15	10	3	3	24
Auto Techniques	54	34	19	12	44	15	6	2	32
Data Processing	15	16	28	32	10	1			17
Electrician Techniques	88	38	25	37	31	13	10	4	45
Insurance	18	8	5	9	11		2	1	9
Machine Tool	31	16	8	14	15	3	3	7	16
Marketing	45	58	40	32	31	3	5	7	37
Mechanical Design	38	19	34	23	18	2	3	6	24
Printing	12	11	20	4	15	1	4	3	12
Residential Design	26	37	68	34	49	12	8	1	40
Welding	26	9	10	3	9	1	4	2	11
TOTAL	435	283	308	227	272	65	51	39	287

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting	18	19	11	17	6			1	12
Clerk Typist	18	42	36	8	26	3	1	1	23
Data Processing	12	12	10	10	4			1	9
Home Economic Assistant	13	15	19	1	13	6	4		12
Insurance		3	2	1					1
Marketing	10	10	13	12	5	4			6
Merchandising		6	4	4	1				3
Nursing	6	9	24	8	7				9
Printing			2	3		1			1
R-D, Drafting		1	2	3	3				2
Secretarial Science	45	67	65	58	35	13	2	6	49
TOTAL	122	184	188	125	100	27	7	9	127

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

North Central Technical Institute
Wausau

Male Non Participants	*Reasons for Not Belonging								Want Club	No. Surveyed
	A	B	C	D	E	F	G	H		
Accounting	27	10	3	15	27	20	19	6		22
Agriculture Mechanic				2	4	2	3	1		2
Automotive	11			4	5	9	10	3		7
Data Processing	10	2		6	10	5	4	1		7
Electrician Techniques	42	8	4	22	76	43	31	14		40
Insurance	7	1		7	4	5	6			5
Machine Tool	11	3	2	6	1	5	2			5
Marketing	44	12	11	21	25	26	25	12		31
Mechanical Design	16	8	3	5	15	6	15	3		11
Nursing		3		1	2					5
Printing	6				2	5	4			3
Residential Design	2	3	1		5	2	1	4		3
TOTAL	176	50	24	89	176	128	120	44		141

Female Non Participants	*Reasons for Not Belonging								Want Club	No. Surveyed
	A	B	C	D	E	F	G	H		
Accounting	4	8	4	16	7	14	14	11		13
Clerk Typist			1	3	9	5	2	1		4
Home Economic Assistant	2			1						1
Marketing	2			3	5	3	4	1		3
Merchandising				1	3	2	3	3		2
Nursing	15	31	6	2	37	13	2	10		21
Printing				2		3	1			1
Secretarial Science				3	2	3	1	4		4
TOTAL	23	39	11	31	63	43	27	30		49

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

North Central Technical Institute
Wausau, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Male Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	77/61.00%	20/16.00%	24/23.00%
B. Presently, the intramural program offers a variety of activities	64/51.00%	24/19.00%	37/30.00%
C. Adequate facilities and supervision are provided	25/20.00%	49/39.00%	52/41.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	29/23.00%	54/44.00%	41/33.00%

Male Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	189/68.00%	40/14.00%	48/17.00%
B. Presently, the intramural program offers a variety of activities	186/68.00%	45/16.00%	44/16.00%
C. Adequate facilities and supervision are provided	61/22.00%	151/55.00%	64/23.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	48/17.00%	142/52.00%	85/31.00%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

83	Archery	30	Skiing	33	Handball
20	Basketball	19	Softball	15	Lacrosse
24	Fencing	49	Swimming & Diving	40	Soccer
19	Football	26	Track & Field	12	Squash
24	Hiking	28	Baseball	45	Tennis
39	Ice Hockey	17	Bowling	82	Volleyball
92	Rifle	17	Cross Country	56	Wrestling
18	Rugby	74	Golf	23	Water Polo

Other: Bicycling, Billiards, Bingo, Boxing, Camping, Canoeing, Car Racing, Curling, Fishing, Foosball, Gymnastics, Judo, Sky Diving, Table Tennis, and Weight Lifting

North Central Technical Institute
Wausau, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Female Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	29/65.00%	3/7.00%	12/27.00%
B. Presently, the intramural program offers a variety of activities	27/63.00%	5/12.00%	11/25.00%
C. Adequate facilities and supervision are provided	14/32.00%	7/16.00%	23/52.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	5/12.00%	11/26.00%	26/62.00%

Female Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	76/64.00%	19/16.00%	24/20.00%
B. Presently, the intramural program offers a variety of activities	58/49.00%	30/25.00%	31/26.00%
C. Adequate facilities and supervision are provided	22/19.00%	48/40.00%	48/40.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	24/21.00%	42/36.00%	50/42.00%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

34	Archery	11	Skiing	6	Handball
16	Basketball	9	Softball	1	Lacrosse
8	Fencing	35	Swimming & Diving	7	Soccer
3	Football	9	Track & Field	1	Squash
24	Hiking	3	Baseball	49	Tennis
2	Ice Hockey	20	Bowling	58	Volleyball
4	Rifle	4	Cross Country	2	Wrestling
1	Rugby	20	Golf	3	Water Polo

Other: Badminton, Bicycling, Gymnastics, & Horseback Riding

North Central Technical Institute
Wausau, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Don't have time

Lack interest in the organizations offered

Don't belong to any specific training

Friends not in these groups

Did belong 1st semester, was the most ridiculous club

Live too far from home

As a nurse in Psychological Training, we are not at school to be able to participate; it also cost too much

Lack of transportation

Was not a worthwhile organization

Have family problems

Family comes first

Enrolled full time, plan to join Secretarial Science next year

Came too late to join

Other things to do

Build a tennis court in area in back of school

Tech. needs some type of on-campus sports program. Gym near campus would keep us occupied; especially in winter. Intramural program through the Y.M.C.A. seems to work well, but the participation could be stronger; more people would participate if facilities were closer to home. Sports around campus are big and the girls would like to be part of it all!

Don't know what we have here

Belong to an organization--just about had to; teacher told me so

No activities for students without a gym or pool--between hours have to spend in lounge or outside

It helps your grades

Waste of time

Didn't like parliamentary procedures

Like to enjoy sports but must work every evening

Inter-school competition in athletics

All this institute, they're all disorganized

Not my type of programs

Take care of children

Bible studies

Being older than quite a few of the students, my social interests are more outside of school

School should have a basketball court on the grounds outside

Didn't pay any dues

Outside interests related to family

Has not received any information as to what intramural activities are offered

Thinks the school is pretty good

Would like to see the use of the city school pools for water sports in the winter.

Would like activities on a more varied time schedule, so people with part-time jobs could participate

Would like a cafe or some sort of quick order restaurant

Keeps in good standing with teachers

Provides an opportunity to serve and lead people

School is more than just a place to learn. People need "fun". Students are people.

Y.M.C.A. membership should be on a voluntary basis only. I feel that the set-up at the Y is second rate. For example, bowling at the Y is not very good. Lanes and fees are substandard.

Help better my confidence with people

School had better get something going to raise the school morale. It's really bad.

Belonging to an organization--something to do and involvement

An opportunity to develop leadership

Inter-school competition would bring school closer together. More students would be playing

Organizations--help make money with club sales

Everyone is in them

North Central Technical Institute
Wausau, Wisconsin

I. INTERPRETATION OF SURVEY

A. MALE PARTICIPANTS - TABLE

The main reason why male students participated in student organizations was the social benefits provided through club activities. However, activities that furthered their academic education was also deemed important. The three main reasons, in order, for participating were:

1. Social activities that are offered (parties, dances, etc.)
2. It is beneficial to my academic education
3. Provides an opportunity to meet new people

B. FEMALE PARTICIPANTS - TABLE

The female participants, unlike the males, participated because of academic reasons and the opportunity to meet new people. Social activities were considered important but far less than academic reasons. The four main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Provides an opportunity to meet new people
3. Credientials are acquired that will be beneficial to obtaining post-graduate employment
4. Social activities that are offered (parties, dances, etc.)

C. MALE NON PARTICIPANTS - TABLE

The main reason the male students do not elect to participate in student organizations was a lack of time for such activities. However, a lack of interest was also deemed an important factor. The three main reason, in order, for not participating were:

1. Work part-time
2. Need the time for studies
3. Do not feel participation is beneficial to my academic endeavor

D. FEMALE NON PARTICIPANT - TABLE

The main reason the females chose not to participate in student organizations was "need time for studies." However, the writer of this paper feels that

martial status was another determining factor. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Do not feel that participation is beneficial to my education
3. Married

E. MEN'S RECREATION SURVEY - PARTICIPANT

The male participant slightly agreed that all students have the opportunity to participate. However, they overwhelmingly felt that the recreation program is not well diversified and lacks adequate facilities and supervision.

F. MEN'S RECREATION SURVEY - NON PARTICIPANT

The male non participant agreed that all students enjoy the opportunity to participate and that the program is well diversified. Also, they disagreed with the statement "adequate supervision and facilities are provided."

It is apparent that the male students would like to see the following programs added by the recreation department:

1. Archery
2. Golf
3. Handball
4. Ice Hockey
5. Rifle
6. Skiing
7. Soccer
8. Swimming & Diving
9. Tennis
10. Volleyball
11. Wrestling

G. WOMEN'S RECREATION SURVEY - PARTICIPANT

The female participants agreed that all students possess the opportunity to participate in recreational activities and that the present program is well diversified. However, uncertainity existed about the adequacy of the facilities and supervision of the recreational activities.

H. WOMEN'S RECREATION SURVEY - NON PARTICIPANT

The women non participants slightly agreed that all students are afforded

the opportunity to participate. But they disagreed that the programs are diversified and provided proper facilities and supervision.

The female respondents indiciated the following programs would be desirable:

1. Archery
2. Bowling
3. Golf
4. Hiking
5. Swimming
6. Tennis
7. Volleyball

II. RECOMMENDATIONS

The writer of this paper, using the survey as a guide, recommends the following suggestions:

1. Social activities should assume an important role in student organization activities--especially in the Trade and Industrial areas.

2. The following programs be added to the recreation program:

   a. Archery (Co-ed)
   b. Hiking (Co-ed)
   c. Ice Hockey (Men)
   d. Rifle (Men)
   e. Skiing (Co-ed)
   f. Swimming (Co-ed)
   g. Track (Men)
   h. Golf (Men & Women)
   i. Handball
   j. Soccer (Men)
   k. Tennis (Co-ed)
   l. Volleyball (Co-ed)
   m. Wrestling (Men)

The writer of this paper, based on observations and visitations with faculty and students, suggests that the following recommendations be considered:

1. The school should hire a full-time activities director to handle all recreational and club activities.

2. Recreational programs should be handled by North Central personnel rather than the Y.M.C.A.

3. Activities should be provided that would benefit non-participants in club meetings during the activity period. This might include:

a. Basketball
b. Cards
c. Football
d. Movies
e. Tennis
f. Volleyball

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Waukesha County Technical Institute

Male Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting		1	3	2	6				2
Data Processing	4	6	3		5		3	3	4
Electronics	1	9	12	4	11		11		8
General Education	3	2	2					3	2
Machine Tool Operator			3		2		1		1
Marketing	3	8	6		5	1	1		4
Safety Techniques			3						1
TOTAL	11	26	32	6	29	1	17	6	22

Female Club Participants	*Reasons for Belonging								No. Surveyed
	A	B	C	D	E	F	G	H	
Accounting		3	2			1			1
Data Processing	11	5	1	2	10				6
Marketing - Fashion		3	5	4					2
Practical Nursing	12	16	24	2	21	2			13
Secretarial Science	7	7	8	2	11	1			6
TOTAL	30	34	40	10	42	4			28

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Waukesha County Technical Institute

Male Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	6	2		6	7	4	5			5
Business	2	3	1	1		5	6		1	3
Data Processing	12		2	8	10		7	2		7
Electrical Techniques	26		7	16	16	11	16	5		16
Machine Tool	2	3			4		1	4		3
Marketing	18	8		2	12	7	7	1	3	11
Mechanical Design	5		4			7	5	3		4
Police Science	18	10	1	6	9	4	4	9	4	13
Safety Techniques	3	2	2	1	3	2	9	2	1	4
Student Nursing	4	2	2		5	3				3
TOTAL	96	30	19	40	66	43	60	26	9	69

Female Non Participants	*Reasons for Not Belonging									
	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting Clerk	2					3				1
Data Processing	3			2	3	3	1			2
Fashion Merchandising	3			2			3			2
Health Occupations	7	8			4					3
Marketing				2	3			1		1
Medical Assistant	2		2							1
Police Science	3				1	3	2			2
Practical Nursing	12	8	6	7	19	5	7	2	1	12
Secretarial Science	10	2		4	13	9	8	3	6	9
Ward Clerk					3	3		6		2
TOTAL	42	18	8	17	46	26	21	12	7	35

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organizations
H. Other (please specify)

Waukesha County Technical Institute
Waukesha, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Men Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	16 66.70%	6 25.00%	2 8.30%
B. Presently, the intramural program offers a variety of activities	20 87.00%	1 4.30%	2 8.70%
C. Adequate facilities and supervision are provided	9 37.50%	11 45.80%	4 16.70%
D. Inter-school competition tends to de-emphasize the importance of intramurals	3 12.50%	15 62.50%	6 25.00%

Men Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	36 53.70%	13 19.40%	18 26.90%
B. Presently, the intramural program offers a variety of activities	43 65.20%	5 7.60%	18 27.20%
C. Adequate facilities and supervision are provided	15 22.70%	20 30.30%	31 47.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	18 27.70%	15 23.10%	32 49.20%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

13	Archery	11	Skiing	17	Handball
3	Basketball	9	Softball	7	Lacrosse
6	Fencing	17	Swimming & Diving	8	Soccer
11	Football	12	Track & Field	7	Squash
7	Hiking	5	Baseball	11	Tennis
6	Ice Hockey	10	Bowling	12	Volleyball
25	Rifle	1	Cross Country	5	Wrestling
7	Rugby	2	Golf	8	Water Polo

Other: Billards, Card Tables, Chess, Cycle, Drag Racing, Horse Backriding, Karate, Ping Pong, Rowing, Scuba Diving, & Trapshooting

Waukesha County Technical Institute
Waukesha, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Women Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	13 48.10%	6 22.20%	8 29.70%
B. Presently, the intramural program offers a variety of activities	16 59.00%	1 3.70%	10 37.30%
C. Adequate facilities and supervision are provided	2 7.40%	9 33.30%	16 59.30%
D. Inter-school competition tends to de-emphasize the importance of intramurals	3 11.10%	6 22.20%	18 66.70%

Women Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	22 68.80%		19 31.20%
B. Presently, the intramural program offers a variety of activities	16 50.00%		16 50.00%
C. Adequate facilities and supervision are provided	14 43.80%		18 56.20%
D. Inter-school competition tends to de-emphasize the importance of intramurals	2 7.1%	9 32.10%	17 60.80%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

13	Archery	4	Skiing	1	Handball
3	Basketball	4	Softball		Lacrosse
4	Fencing	12	Swimming & Diving		Soccer
1	Football	1	Track & Field	2	Squash
6	Hiking	2	Baseball	4	Tennis
	Ice Hockey	6	Bowling	14	Volleyball
6	Rifle		Cross Country		Wrestling
	Rugby		Golf	2	Water Polo

Other: Karate

Waukesha Country Technical Institute
Waukesha, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Not enough time

Boyfriend

Because some people are older, they're not always accepted

Too busy typing for students

Work full time

Anti social

Have better things to do, like being with friends

Have a family

Full schedule

Belong to Decca, would like to see an idea exchange or competition on a local level or between schools in this area

To help the school

Believe that more students would benefit from and participate in student activities if the persons already in the clubs or activities would let a newcomer in. The feeling is that the clubs and organizations either ignore or are not receptive to newcomers. Referring especially to the student government in this respect.

Conflicts with class schedule

Getting married

Student government sets such a poor example that I would be embarrassed to belong to any organization

Less attention paid to intramurals and more to pressing matters such as student government, price of school food, bookstore prices. Get irresponsible jokers out of student government and get someone who is interested in the school instead of his own ego.

Thinks the student association could be improved a great deal

No information published

Intramurals are benefical to a person, especially if they don't have time for a varsity sport, or if there is no varsity sport like that in existance.

Waukesha County Technical Institute
Waukesha, Wisconsin

I. Interpretation of Survey

A. MALE PARTICIPANTS - TABLE

The main reason male students participated in club activities was the benefits received for future employment. The three main reasons, in order, for participating were:

1. It is beneficial to my academic endeavor
2. Provides an opportunity to meet people with common interests
3. Provides an opportunity to meet new people

B. MALE PARTICIPANTS - TABLE

The female participants, like the males, felt that academic benefits received and the opportunity to meet people were the main reasons for belonging to student organizations. The three main reasons, in order, for participating were:

1. Provides an opportunity to meet people with common interests
2. It is beneficial to my academic endeavor
3. Provides an opportunity to meet new people

C. MALE NON PARTICIPANTS - TABLE

The male non participant overwhelmingly responded that working part-time was the main reason for not joining a student organization. However, many respondents simply lacked any interest in belonging to any student organization. The three main reasons, in order, for non participating were:

1. Work part-time
2. Need time for studies
3. Lack interest in belonging to any student organization.

D. FEMALE NON PARTICIPANT - TABLE

The females, like the males, felt that lack of time was the main reason for not participating. Also the female respondents did not feel that club activities were beneficial to their educational goals. The three main reasons, in order, for not participating were:

1. Need time for studies
2. Work part-time
3. Do not feel that participation is beneficial to my academic endeavor

E. MEN'S RECREATION SURVEY - PARTICIPANT TABLE

The male participants overwhelmingly felt that all students have the opportunity to participate in a diversified recreation program. However, their was disagreement toward the statement "adequate facilities and supervision are provided."

F. MEN'S RECREATION SURVEY - NON PARTICIPANT TABLE

The male non participants slightly agreed that a variety of recreation programs are offered and that all students have the opportunity to participate. Also, there was uncertainity about the adequacy of facilities and supervision provided by the recreation department.

The male students felt the following programs should be added to the recreation program:

1. Archery
2. Handball
3. Rifle

G. WOMEN'S RECREATION SURVEY - PARTICIPANT TABLE

The female respondents, unlike the males, disagreed that all students have the opportunity to participate in recreational activities. Also, a great deal of uncertainity existed in the diversification of programs, facilities, and supervision offered by the recreation department.

H. WOMEN'S RECREATION SURVEY - NON PARTICIPANT TABLE

The female non participants, unlike the participants, felt that all students have the opportunity to participate in recreation activities. However, they responded that uncertainity existed in their feelings towards adequate facilities, supervision, and the variety of programs offered.

The female students felt the following programs should be initiated by the recreation department:

1. Archery
2. Swimming & Diving
3. Volleyball

II. Recommendations

The writer of this paper, using the survey as a guide, recommends the following suggestions:

1. More recreational facilities should be made available for student use.

2. Programs should be added to the recreation program in which women may participate.

3. The following programs should be considered in the future planning of the recreation department:

   a. Archery (Co-ed)
   b. Handball (Men)
   c. Rifle (Co-ed)
   d. Volleyball (Co-ed)

From observations of the Waukesha Country Technical Institute, the writer feels the following recommendations should be considered:

1. A check-out service should be established in the Student Center. This service could provide the following recreational equipment:

   a. Cards
   b. Checkers
   c. Chess
   d. Cribbage boards
   e. Friesbies
   f. Footballs
   g. Tennis equipment

2. Tournaments should be conducted through the Student Center:

   a. Pool
      1) 14-1
      2) Straight
      3) 8-Ball
   b. Ping Pong
      1) Singles
      2) Doubles
      3) Co-ed doubles
   c. Cribbage Tournament
      1) Singles
      2) Doubles
   d. Chess
   e. Checkers

3. An equitable amount of money, compared to intra-collegiate sports, be allocated to the intramural activities.

STUDENT ORGANIZATION CLUB PARTICIPANTS
Male and Female

Mid-State Technical Institute - Wisconsin Rapids

Male Club Participants	*Reasons for Belonging								
	A	B	C	D	E	F	G	H	No. Surveyed
Accounting	26	35	24	20	14	3			22
Auto Mechanics	22	13	6		19		6		11
Civil Technology	13	12	9	4	12	3	3	3	11
Instrumentation	18	10	12		15		1	3	10
Mechanical Design	6	9		1	8				4
Machine Tool	6	3	5	2	1		2	5	4
Marketing	16	28	12	24	18	7		3	19
Real Estate	3	1	3	3	2				2
Welding		1	2	4	6			5	3
TOTAL	110	112	73	58	95	13	12	19	86

Female Club Participants	*Reasons for Belonging								
	A	B	C	D	E	F	G	H	No. Surveyed
Accounting	18	32	8	4	15	1			13
Child Care Assistant	6	12		3	3	2	2	1	6
Mechanical Design	7	3	3	3	6	1	1		4
Marketing	1		3		2				1
Secretarial Science	29	19	5	12	10	2		2	13
TOTAL	61	66	19	22	36	6	3	3	37

*Reasons for Belonging

A. Social activities that are offered (parties, dances, etc.)
B. Provides an opportunity to meet new people
C. It is beneficial to my academic endeavor
D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
E. Provides an opportunity to meet people with common interests
F. Other activities are not available during an activity period
G. Provides an opportunity to cultivate my hobbies
H. Other (please specify)

STUDENT ORGANIZATION NON PARTICIPANTS
Male and Female

Mid-State Technical Institute - Wisconsin Rapids

	*Reasons for Not Belonging									
Male Club Participants	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Accounting	3	5			2	5	2	1		3
Auto Body	8	4		12	10	13	19	3		13
Auto Mechanics	31	14	18	15	14	22	20	13		27
Civil Technology	1	2		6	4	1	6	4	2	4
Instrumentation	3	5		2	4	5	7	2		5
Mechanical Design	9	5		7	9	4	7	10		9
Machine Tool	3			6		8	7			4
Marketing	18	5	5	7	3	6	13	7	4	11
Welding	5	3			1	2				2
TOTAL	81	43	23	55	47	66	81	40	6	78

	*Reasons for Not Belonging									
Female Club Participants	A	B	C	D	E	F	G	H	Want Club	No. Surveyed
Child Care Assistant	26	14	5	4	16	2	9		2	14
Marketing						3	2	1		1
Secretarial Science		6			12	7	9	5		6
TOTAL	26	20	5	4	38	12	20	6	2	21

*Reasons for Not Belonging

A. Work part-time
B. Married
C. Lack of social activities (dances, parties, etc.)
D. Enjoy other recreational activities that are offered during an activity period
E. Need the time for studies
F. Do not feel that participation is beneficial to my education
G. Lack interest in belonging to any student organization
H. Other (please specify)

Mid-State Technical Institute
Wisconsin Rapids, Wisconsin

MEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Men Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	75 87.22%	6 6.97%	5 5.81%
B. Presently, the intramural program offers a variety of activities	62 71.27%	17 19.54%	8 9.19%
C. Adequate facilities and supervision are provided	34 39.09%	22 25.28%	31 35.63%
D. Inter-school competition tends to de-emphasize the importance of intramurals	19 21.34%	57 64.06%	13 14.60%

Men Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	57 76.01%	7 9.33%	11 14.66%
B. Presently, the intramural program offers a variety of activities	44 58.68%	17 22.66%	14 18.66%
C. Adequate facilities and supervision are provided	40 50.00%	24 30.00%	16 20.00%
D. Inter-school competition tends to de-emphasize the importance of intramurals	13 17.56%	34 45.96%	27 36.48%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

42	Archery	28	Skiing	22	Handball
3	Basketball	13	Softball	2	Lacrosse
14	Fencing	33	Swimming & Diving	11	Soccer
52	Football	25	Track & Field	2	Squash
11	Hiking	23	Baseball	19	Tennis
13	Ice Hockey	7	Bowling	13	Volleyball
57	Rifle	12	Cross Country	32	Wrestling
2	Rugby	15	Golf	8	Water Polo

Other: Billards, Gymnastics, Karate, Ping Pong, Skeet & Trap, & Roller Derby

Mid-State Technical Institute
Wisconsin Rapids, Wisconsin

WOMEN'S RECREATION SURVEY

Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

Women Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	26 72.23%	2 5.55%	8 22.22%
B. Presently, the intramural program offers a variety of activities	22 61.12%	5 13.88%	9 25.00%
C. Adequate facilities and supervision are provided	5 14.28%	10 28.57%	20 57.15%
D. Inter-school competition tends to de-emphasize the importance of intramurals	6 16.66%	15 41.67%	15 41.67%

Women Non Participants	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	14 66.64%	2 9.09%	6 27.27%
B. Presently, the intramural program offers a variety of activities	13 56.53%	3 13.04%	7 30.43%
C. Adequate facilities and supervision are provided	6 28.57%	6 28.57%	9 42.86%
D. Inter-school competition tends to de-emphasize the importance of intramurals	4 19.04%	4 19.04%	13 61.92%

Please check any intramural program that is presently non-existent in which you would like to be a participant.

20	Archery	16	Skiing	1	Handball
4	Basketball	11	Softball		Lacrosse
1	Fencing	14	Swimming & Diving	11	Soccer
14	Football	8	Track & Field	1	Squash
21	Hiking	6	Baseball	18	Tennis
3	Ice Hockey	5	Bowling	7	Volleyball
7	Rifle	3	Cross Country	6	Wrestling
1	Rugby	5	Golf	2	Water Polo

Other: Chess, Curling, Gymnastics, & Ping Pong

Mid-State Technical Institute
Wisconsin Rapids, Wisconsin

STUDENT RESPONSES

Comments were as follows:

Believe intramural program is pretty good--wish there were more activities that both girls and boys could participate in together

Think school should have more social activities

Should have games with major colleges for exhibition

Shouldn't strictly be on Wednesday

Like to see drama or a choir organization

Group lacks good organization

Not much time

Commute

Should offer more so students get to know others better

Part-time student and am not aware of what is offered

Have children--enough to do

Clubs offer a chance to help people

Have night classes

Would like to see a regular physical education class set up as an elective

Want a rifle club

Need more facilities

School meets the needs of its students

Intramural program good but too limited

Considering the facilities of this institution, a tremendous job is being done in all areas of student activities

The school needs much improvement and repair of attitude, enthusiasm, and facilities

MID-STATE TECHNICAL INSTITUTE
Wisconsin Rapids, Wisconsin

I. Interpretation of Surveys

A. MALE PARTICIPANTS - TABLE

The main reason the male students participated in club activities was because of the social benefits derived from the club. Surprisingly, these benefits were far more important than any employment or academic advantages received from participating. The three major reasons, in order, for participating were:

1. An opportunity to meet new people
2. Social activities offered
3. An opportunity to meet people with common interests

B. FEMALE PARTICIPANTS - TABLE

The female participants, like the males, belonged to student organizations for exactly the same reasons previously mentioned. These three reasons, again, were:

1. An opportunity to meet new people
2. Social activities offered
3. An opportunity to meet peoplw with common interests

C. MALE NON-PARTICIPANTS - TABLE

The male students felt that a lack of time was one of the main reasons for not participating in a student organization. However, there was a strong feeling that clubs were not beneficial to their education. The three main reasons, in order, for not participating were:

1. Work part-time
2. Lack interest in belonging to a student organization
3. Do not feel that participation is beneficial to my academic endeavor

D. FEMALE NON-PARTICIPANTS - TABLE

The female students definately felt that a lack of time kept them from participating in activities. These three major reasons, in order, for not belonging were:

1. Need time for studies
2. Work part-time
3. Are married and lack of any desire to belong to a student organization

E. MEN'S RECREATION

Among the participating male students, it was unanimous that all students had the opportunity to participate and that a variety of programs were offered. However, there was an apparent dissatisfaction with the facilities that were provided.

The non-participants, on the other hand, agreed that the opportunity to participate exists but felt that the programs were limited and that there were not enough facilities available for student use.

It was apparent that the male students would like to participate in the following programs:

1. Archery
2. Football
3. Rifle
4. Skiing
5. Swimming & Diving
6. Handball
7. Tennis
8. Track & Field
9. Wrestling

WOMEN'S RECREATION

The female participants agreed that all students had the opportunity to participate and that a variety of activities were offered. However, uncertainity existed in the adequacy of facilities and supervision provided for recreational activities.

On the other hand, there was light disagreement among the non-participants in relation to an opportunity to participate and the availablity of programs in which to participate. Also, there were mixed feelings towards the adequacy of the facilities available for their use.

The programs that the female students wanted included in the recreation program were:

1. Archery
2. Hiking
3. Skiing
4. Tennis

II. Recommendations

The writer of this paper, using the surveys as a guide, recommends the following suggestions:

1. More social events should be initiated through the senate or student organizations.

2. The following intramural programs should be considered in the future expansion of the Recreation Department:

   a. Football (men)
   b. Rifle club, classes, or instruction (men)
   c. Archery (co-ed)
   d. Tennis (co-ed)
   e. Wrestling (men)
   f. Hiking (women)
   g. Skiing (co-ed)
   h. Open swimming (co-ed)
   i. Volleyball (co-ed)

After observing the institute and discussing the over-all program with faculty and students, the writer feels the following recommendations should be considered:

1. The gym should be available for student use other than one night per week.

2. Do not have limitations to the number of times a student may use the Y.M.C.A. facilities.

3. A student organization handbook should be formulated pertaining to school policy.

4. T-shirts should be available to use for the intramural basketball leagues.

5. A student center should be located near a gym.

6. Written guidelines for student organizations should be established.

CLUB ADVISOR DIRECTORY

1972 - 73

School	Club & Recreation Advisor
Fox Valley Technical Institute, Appleton 105 East Kimball Street Appleton, WI 54911	Mrs. Dee Nagen
District I Technical Institute-Eau Claire 620 West Clairemont Avenue Eau Claire, WI 54701	Mr. Jim Severson
Southwest Wisconsin Vocational and Technical School Brunson Boulevard Fennimore, WI 53809	Mr. Mark Strohbusch
Northeast Wisconsin Technical Institute 200 South Broadway Green Bay, WI 54303	Mrs. Sue Trensdell
Janesville Vocational and Technical School 527 South Franklin Street Janesville, WI 53545	Mr. R. W. Hogard
Kenosha Technical Institute 3520 30th Avenue Kenosha, WI 53140	Mr. Warren Greco
Western Wisconsin Technical Institute Sixth Street - Vine to Pine LaCrosse, WI 54601	Mr. Dick Hoeft
Madison Area Technical College 200 North Carroll Street Madison, WI 53703	Miss Karen Robert
Milwaukee Area Technical College Milwaukee Campus 1015 North Sixth Street Milwaukee, WI 53203	Miss Doris Beyer
Nicolet College and Technical Institute Highway G South Rhinelander, WI 54501	Mr. Roger Sabota
Rice Lake Vocational and Technical School 34 South Wilson Avenue Rice Lake, WI 54868	Mr. George Theis

Waukesha County Technical Institute
222 Maple Avenue
Waukesha, WI 53186

Mrs. Lynette Schultz

North Central Technical Institute
1000 Schofield Avenue
Wausau, WI 54402

Mr. Wally Baker

Mid-State Technical Institute, Wisconsin Rapids
431 Lincoln Street
Wisconsin Rapids, WI 54494

Mr. David Twombley

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FUND RAISING PROJECTS

Auctions
Book Sale
Book Cover Sale
Button Sale
Calendar Sale
Candy Sale
Car Bush
Car Wash
Decal Sales
Food Sales
Hayride
Jail Booth
Live Entertainment
Minature Basketball Sale
Movies
Mug Sale
Novelty Sale
Parties
Picnic
Pin Sale
Public Dance
Raffle (skiies, car, gun, etc.)
School Dance
Student - Faculty Basketball Game
Sweatshirt Sale
Toy Collection
Ugly Man Contest
Vending Machines
Vets - Faculty Basketball Game
White Elephant Sale

STUDENT ORGANIZATION ACTIVITIES

All-School Bowling Party
Awards Banquet
Beer Parties
Blood Drive
Canoe Outing
Christmas Dance
Christmas Party
Christmas Party for Needy Families
Clean Up Week
Convocation
DECA Week
Employer & Employee Banquet
Enrichment Film Program
Fall Picnic
Graduation
Ham Radio Station
Hayride
Homecoming
Ice Fishing
Leadership Conference
March Fest
Modern Main Sub-project
Rap Session
Road Rally
Sadie Hawkins Dance
Smelt Fry
Smelt Trip
Snow-Ball Dance
Snowmobile Sufaries
Spring Picnic
Tours of Campus
United Fund Drive
Voters Babysitting Service
Voters Taxi Service
Winter Carnival

STUDENT ORGANIZATIONS SURVEY

	STUDENT ORGANIZATION FUNDING				ADVISORY SELECTION			ADVISORY COMPENSATION				MEETINGS HELD		ADVISORY MEETINGS			ACTIVITIES DIRE	
	Activity Fee	Budget	Projects	Membership Fee	Voluntary	Appointed	Elected	Pay	Reduction in Teaching Load	Gift	None	Block hour or Activity Period	Once a Semester	Once a Year	More than Twice a Year	Never	Part-time	Full-
Eau Claire	Senate $1 Club $1/mem.		Clubs		Clubs						X	Yes			X		X	
Fennimore	Senate $7		Clubs		Clubs	Senate					X	Yes		X			X	
Fond du Lac	Senate		Clubs	Clubs	Clubs	Senate					X			X			X	
Green Bay	Senate Clubs		Clubs	Clubs	Clubs	Senate					X	Yes				X	X	
Kenosha	Senate (40% collected)		Clubs	Clubs	Clubs	Clubs Senate				(Honorium) Clubs		Yes			X		X	
LaCrosse	Senate	Clubs	Clubs	Clubs	Clubs	Clubs Senate		Clubs (Set amt.)	Clubs					X				X
Madison	Senate $3	Clubs	Clubs	Clubs $10	Clubs	Senate			Clubs		Clubs	None				X		X
Milwaukee	Senate $3		Clubs	Clubs	Clubs	Senate					X	None			Informal			X
Rhinelander	None is chg.		Clubs	Clubs	Clubs	Senate	Clubs				X	None				X	X	
Rice Lake	Senate $7.50		Clubs		Clubs	Senate		Union Contracted				Yes				X	X	
Wausau	Senate		Clubs	Clubs	Clubs	Senate					X	Yes					X	
Waukesha	Senate	Clubs	Clubs		Clubs	Senate			Clubs			Yes	X					X
Wisconsin Rapids	Senate Clubs $4/mem.				Clubs	Senate		Clubs (Set amt.)				Yes	X				X	

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INTRAMURAL - RECREATION DIRECTORY

1972 - 73

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Waukesha Country Technical Institute
222 Maple Avenue
Waukesha, WI 53186
Mr. Wally Weise

North Central Technical Institute
1000 Schofield Avenue
Wausau, WI 54402
Mr. Wally Baker

Mid-State Technical Institute, Wisconsin Rapids
431 Lincoln Street
Wisconsin Rapids, WI 54494
Mr. David Twombley

INTRAMURAL OR INTER-COLLEGIATE ATHLETIC ACTIVITIES OFFERED IN THE TECHNICAL INSTITUTES IN WISCONSIN

	ARCHERY		BADMINTON		BASEBALL		BASKETBALL		BOWLING		CHEERLEADING		CROSS-COUNTRY		CURLING		FENCING		FOOTBALL		GOLF		HANDBALL		GYMNASTICS		ICE HOCKEY		ICE SKATING		SKIING		SOCCER		SOFTBALL		SWIMMING		TENNIS		TRACK		VOLLEYBALL		WRESTLING	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Appleton							X		X	X																																				
Eau Claire							X		X	X									X	X	X	X					X								X	X	X	X					X	X		
Fennimore							X	X	X	X		X							X		X	X					X								X	X	X	X					X	X		
Green Bay							X		X	X									X		X	X															X	X					X	X		
Janesville					X		X					X																															X	X		
Kenosha							X					X							X	X									X	X			X		X	X	X	X	X	X			X			
La Crosse			X	X	X		X	X	X	X	X	X	X		X	X					X	X	X	X	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X		
Madison	X	X	X	X	X		X	X	X	X		X	X						X		X														X	X	X	X	X	X	X	X	X		
Milwaukee					X		X		X	X		X	X				X				X				X								X				X	X	X					X		
New Richmond							X																																						
Rhinelander							X												X																									X		
Rice Lake							X		X	X		X							X		X													X												
Superior							X		X			X																			X	X			X								X			
Waukesha					X		X		X	X		X	X						X								X	X			X	X	X		X	X			X	X			X			
Wausau							X	X																																					
Wisconsin Rapids							X	X	X	X		X									X														X	X	X	X	X	X			X	X		

M Male
F Female

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- STUDENT ACTIVITIES SURVEY -

1. Area of Training _____

2. Sex /_/ Male /_/ Female

3. Check the appropriate box:

   Presently, I do /_/ do not /_/ belong to a student organization at this institution.

4. If you belong to a student organization, please answer the question given below. If not, go on to question Number 6.

   Check the type of organization you belong to:

   /_/ Social /_/ Academic /_/ Student Senate

5. Please rank, in order, three reasons why you belong to a student organization (1 - best reason: 2 - second best; 3 - third best).

   _____ A. Social activities that are offered (parties, dances, etc.)
   _____ B. Provides an opportunity to meet new people
   _____ C. It is beneficial to my academic endeavor
   _____ D. Credentials are acquired that will be beneficial to obtaining post-graduate employment
   _____ E. Provides an opportunity to meet people with common interests
   _____ F. Other activities are not available during an activity period
   _____ G. Provides an opportunity to cultivate my hobbies
   _____ H. Other (please specify) _____

   Go on to question Number 8

6. Please rank, in order, three reasons why you do not belong to a student organization (1 - best reason; 2 - second best; 3 - third best).

   _____ A. Work part-time
   _____ B. Married
   _____ C. Lack of social activities (dances, parties, etc.)
   _____ D. Enjoy other recreational activities that are offered during an activity period
   _____ E. Need the time for studies
   _____ F. Do not feel that participation is beneficial to my education
   _____ G. Lack interest in belonging to any student organizations
   _____ H. Other (please specify) _____

7. Does a student organization presently exist in your area of training?

   /_/ Yes /_/ No

   If not, would you participate if an organization was initiated?

   /_/ Yes /_/ No

OVER

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STUDENT ACTIVITIES SURVEY

8. I do /__/ do not /__/ participate in an intramural program at the present time.

9. Please check the box that accurately describes your feeling toward the intramural activities program presently offered at your school.

	Agree	Disagree	Uncertain
A. All students have the opportunity to participate	/__/	/__/	/__/
B. Presently, the intramural program offers a variety of activities	/__/	/__/	/__/
C. Adequate facilities and supervision are provided	/__/	/__/	/__/
D. Inter-school competition tends to de-emphasize the importance of intramurals	/__/	/__/	/__/

10. Please check any intramural program that is presently non-existent in which you would like to be a participant.

_____ Archery	_____ Skiing	_____ Handball
_____ Basketball	_____ Softball	_____ Lacrosse
_____ Fencing	_____ Swimming & Diving	_____ Soccer
_____ Football	_____ Track & Field	_____ Squash
_____ Hiking	_____ Baseball	_____ Tennis
_____ Ice Hockey	_____ Bowling	_____ Volleyball
_____ Rifle	_____ Cross Country	_____ Wrestling
_____ Rugby	_____ Golf	_____ Water Polo
		_____ Other (please specify) _____

11. COMMENTS:

STUDENT ORGANIZATION FUNDING

Check the appropriate box(es) and fill in blank(s) if necessary.

Student organizations receive funds from the following sources:

☐ Activity fee

☐ School budget

☐ Membership fee

☐ Fund raising projects

☐ Private grants, gifts, etc.

☐ Other _____

☐ None

Monies obtained from an activity fee or school budget are allocated according to:

☐ Budget submitted by each organization

☐ Set amount per member $_____

☐ Set amount per organization $_____

☐ Other _____

☐ None

Comments:

STUDENT ORGANIZATION ADVISORS

Check the appropriate box(es) and fill in blanks if necessary.

Advisors for student organizations are:

- /___/ Selected on a voluntary basis
- /___/ Appointed
- /___/ Elected by faculty
- /___/ Other (please specify) _____
- /___/ Do not know

For his services an advisor receives the following compensation

- /___/ Pay
  - (a) _____ Based on merit
  - (b) _____ Set amount
- /___/ Gift
- /___/ Reduction in teaching load
- /___/ Other (please specify) _____
- /___/ None
- /___/ Do not know

Advisory meetings are held:

- /___/ Never
- /___/ Once a month
- /___/ Once a semester
- /___/ Once a year
- /___/ Other (please specify) _____
- /___/ Do not know

Advisory meetings include youth organization activities in their agenda

- /___/ Never
- /___/ Sometimes
- /___/ At all meetings

STUDENT ORGANIZATION MEETING

Check the appropriate box(es) and fill in the blanks(s) if necessary.

Meetings occur:

- [ ] Once a week
- [ ] Every other week
- [ ] Once a month
- [ ] Other _____

Meetings are held on:

- [ ] Monday
- [ ] Tuesday
- [ ] Wednesday
- [ ] Thursday
- [ ] Friday
- [ ] Varies
- [ ] Other _____

Meetings are usually scheduled during:

- [ ] An Activity Period
- [ ] Free-Block Hour
- [ ] Non-School Hours
- [ ] None

Meetings are usually held at:

- [ ] School Facilities
- [ ] Other Institutions
- [ ] Varies
- [ ] Other _____

COMMENTS:

CLUB PROJECTS SURVEY

Check the five (5) top fund raising projects:

_____ Food Sales	_____ Car Bash
_____ Candy Sales	_____ Book Sale
_____ School Dance	_____ Raffles
_____ Public Dance	_____ Button Sales
_____ Car Wash	_____ Book Cover Sales
_____ Movies	_____ Novelty Sale
_____ Picnic	_____ Parties
_____ Sweatshirt Sale	_____ Live Entertainment
_____ Hayrides	_____ Surveys
_____ Other (Specify)	_____ Other (Specify)
_____	_____

Comments:

STUDENT ORGANIZATION ACTIVITIES

Place a check (x) for all activities that your organization has sponsored or participated in during the past year:

_____ Sadie Hawkins Dance

_____ Christmas Dance

_____ Sno-Ball Dance

_____ Winter Carnival

_____ Other Dances

_____ Spring Picnic

_____ Fall Picnic

_____ Road Rally

_____ Other (Specify) _____

_____

_____ Christmas Party

_____ Graduation Banquet

_____ Hayride

_____ Homecoming (basketball)

_____ Beer Parties

_____ Employer & Employee Banquet

_____ DECA Week

_____ Other (Specify) _____

_____

_____ Other (Specify) _____

Comments:

PARTICIPATION SURVEY

Please check the active club(s) in your school and give the total membership of each club.

	CLUB	MEMBERSHIP		CLUB	MEMBERSHIP
_____	Accounting	_____	_____	Merchanical Design	_____
_____	Auto	_____	_____	Medical Lab	_____
_____	Barbering	_____	_____	Metals	_____
_____	Business Education	_____	_____	Outdoor Club	_____
_____	Data Processing	_____	_____	Printing	_____
_____	Drafting	_____	_____	Secretarial	_____
_____	Electronics	_____	_____	Sportmen's Club	_____
_____	Fashion Merchandising	_____	_____	T & I	_____
_____	Home Economics	_____	_____	Vets Club	_____
_____	Machine Tool	_____	_____	Wood Technics	_____
_____	Marketing	_____	_____	Other	_____
_____	Other	_____			

M I D - S T A T E T E C H N I C A L I N S T I T U T E

Area VTAE District 14
Wisconsin Rapids, Wisconsin

STUDENT SENATE

PARLIAMENTARY PROCEDURE

I. Value of parliamentary procedure

A. Enables an assembly to transact business with speed and efficiency.
B. Protects the rights of each individual therein.
C. Preserves a spirit of harmony among the members.

1. Only one subject may claim the attention of the assembly at one time.
2. Each proposition presented for consideration is entitled to full and free debate.
3. Every member has rights equal to those of every other member.
4. The will of the majority must be carried out, and the rights of the minority must be preserved.
5. The personality and desires of each member should be merged into the larger unit of the organization.

II. Order of business after the chairman has called the meeting together. (Chairman says "The meeting will please come to order.")

A. Roll call by the secretary. Chairman says, "The secretary will please call the roll."
B. Reading of the minutes of the previous meeting, followed by their correction and approval.

1. Chairman says "Will the secretary please read the minutes of the last meeting." (If there has been a special meeting since the last regular meeting, the report of the special meeting is read also.)
2. After secretary has read report Chairman says "Are there any corrections?"
3. If there are no corrections, Chairman says "Since there are no corrections the minutes stand approved as read."
4. If there are corrections, these corrections are made and then chairman calls for further corrections. If none, he says, "there being no further corrections, the minutes will stand approved as corrected."

C. Report of treasurer (not necessary at every meeting.) Chairman says "Will the treasurer please give his report."

D. Report of standing committees or special committees. (not necessary at every meeting.)
E. Unfinished business (that business not completed at past meeting.) Chairman says "Is there any unfinished business to come before the meeting."
F. Announcements (Read by the President)
G. New business. (That business not previously discussed by the club members.) Chairman says "Is there any new business to come before the meeting?"
H. Adjournment. After chairman takes vote on motion to adjourn he says, "the meeting is adjourned" or "The meeting is not adjourned (if the motion did not recieve necessary vote.")

III. Motions used most often in a business meeting.

A. Main motion

1. Definition--a proposal of an activity for an organization.
2. Proper phraseology. "I move that we have a party." "I move that we give $10 to the Red Cross." Not: "I make a motion."
3. Steps in the procedure of a main motion
   a. Member addresses chairman "Mr. Chairman," or "Madam Chairman"
   b. Chairman recognizes him saying "Mr. Jones" or "Mary." By this action the Chairman gives the member permission to speak. He is said to have the floor.
   c. Member states his motion as "I move that we attend the play "The Corn is Green."
   d. Another member seconds the motion saying simply "I second it". If no second, chairman says "motion is lost for lack of a second."
   e. Chairman states the motion to the group as "It has been moved and seconded that we attend the play "The corn is Green" Is there any discussion?"
   f. Discussion (i.o. pro and con comments by members of the proposed main motion). These suggestions are observed:
      (1) The member wishing to speak must rise address the chairman and be recognized by the chairman. This eliminates discussion between two or three members and directs everyone's attention on the member speaking to the group.
      (2) The chairman gives priority in speaking to the member who rises first. If there is a draw between two members, the chairman lets one speak and then the other except - if one of the members has been talking often, the chairman lets the other member speak first. Alternative views of the different members are preferred by the chairman.

(3) The chairman must keep the discussion centered on the motion before the house.
(4) At no time while he is acting as chairman should the chairman express his viewpoints on the motion. Another member may preside if the chairman wishes to discuss pro or con.
(5) The chairman cannot show partiality. At all times he is a neutral presiding officer.
(6) If there is no discussion, the chairman tries to encourage discussion by calling on individual members to express their views on the motion.

g. Chairman takes the vote saying "All those in favor of the motion that we attend the play "The Corn is Green" please say "Aye", Contrary, same sign. Affirmative note is taken first.
h. Chairman announces the vote, "The motion is carried." "The motion is lost."

4. Vote required is a majority which usually means one over 1/2 of those present.

B. Amendment

1. Definition - a change of modification in a motion. Amendment may be made by adding something to original motion or by substituting something instead of a word or phrase in the original motion. Also called an amendment of the first order.
2. Proper phraseology "I move that we amend the motion by adding the words "at our expense" after the words "That we have lunch in the tea room". "I move that we amend the motion striking out the word upperclassmen on the original motion. ("I move that we send 3 upperclassmen to the convention as our delegates") "I move that we amend the motion by substituting (or striking out the word four and inserting the word 2 in the original motion.)
3. Subsidiary motions apply to main motions.
4. Steps in procedure of an amendment
   a. An amendment may be proposed only during the discussion period.
   b. Member rises, addresses chairman.
   c. Chairman recognizes him.
   d. Member states amendment.
   e. Amendment is seconded.
   f. Chairman states amendment to the group and calls for discussion of the amendment.
   g. Discussion of amendment.
   h. Chairman takes the vote on the amendment.
   i. Chairman announces the vote. If the amendment is carried the chairman makes that modification in the original motion. Then he calls for further discussion of the changed motion. If the amendment is lost the chairman calls for further discussion of the motion in its original form.
5. Vote required to pass an amendment is a majority.

C. Amendment to an amendment.

1. Definition - a change or modification of an amendment. It is also called an amendment of the second order. Only one

amendment of the second order can be before the house at one time. Likewise, only one amendment of the first order may be before the house at one time.

2. Proper phraseology "I move to amend the amendment by striking out (or by adding) (or by substituting.)
3. Steps in the procedure.
   a. An amendment to an amendment can be proposed only during the discussion period of the amendment.
   b. The steps are the same as in the amendment.
4. A majority vote is necessary to carry the amendment to the amendment.

D. Point of Order.

1. Definition - member wishes to designate a mistake or error in parliamentary procedure. In this motion he states an error has been made. Since it is necessary to correct a mistake as soon as possible after it has been made, this motion may interrupt a member speaking. It is too late to correct a mistake if other business has transpired.
2. Proper phraseology "Mr. Chairman, I rise to a point of order."
3. Steps in the procedure.
   a. Member rises and says without waiting for recognition "Mr. Chairman, I rise to a point of order."
   b. Chairman says "State your point of order."
   c. Member states error as "There is one amendment of the first order before the house, until that is voted upon another amendment of the first order is out of order."
   d. Chairman gives decision. If the member is right he says "your point of order is well taken." If no mistake in parliamentary procedure has been made the chairman says "your point of order is not well taken."
   e. If the chairman does not wish to give a decision, he calls for a vote by the members and the group abides by that decision.
4. Vote-none-chairman decides generally. If he does take a vote, a majority decides.

E. Parliamentary Inquiry

1. Definition - Member tactfully asks if an error has been made in parliamentary procedure. Otherwise it is like point of order. Sometimes that is the more tactful way of calling attention to a mistake.
2. Proper phraseology "Mr. Chairman, I rise for Parliamentary inquiry."
3. Steps in procedure.
   a. Member rises and says without waiting for recognition "Mr. Chairman, I rise for parliamentary inquiry."
   b. Chairman says "State your inquiry."
   c. Member asks his question. "Is there not one amendment of the first order before the house? Then, is not this amendment of the first order out of order until a vote has been taken upon

the first."

d. Chairman gives decision. "Your inquiry is well taken" or your inquiry is not well taken."

4. Vote - None-Chairman decides.

F. Previous question sometimes call question.

1. Definition - The previous question is simply a motion to discussion or debate upon the motion before the house. It does not decide the motion under consideration only ends discussion of it.
2. Proper phraseology. "I move the previous question" Also acceptable but not as good: "question".
3. Steps in the procedure.
   a. Proposed only during discussion period of motion. Member rises - addresses chairman saying "Mr. Chairman" He cannot interrupt a speaker.
   b. Chairman recognizes member.
   c. Chairman states motion "I move the previous question"
   d. Motion is seconded. If motion is not seconded chairman says "The previous question motion is lost for want of a second."
   e. But if seconded chairman says "The previous question has been moved and seconded. All those in favor please raise right hand (or stand) Contrary the same sign." There is no discussion period of the previous question in motion. That is the group does not make pro and con comments about stopping the discussion of the original motion.
   f. Chairman announces vote on previous question. If the previous question is carried, the chairman immediately takes a vote on the motion which is under consideration. If the previous question is lost there is further discussion of the motion under consideration.
4. Vote necessary is 2/3. This large vote protects the members against any railroading of a motion and insures each member his right to comment upon the motion before the house. Since a 2/3 vote is necessary, this vote is taken by a show of hands, or by the members standing.

G. Request for Information

1. Definition - Member wishes certain knowledge before voting upon a question. For example, before he votes to have a party, he may wish to know how much money is in the club treasury.
2. Proper phraseology, "Mr. Chairman, I rise for information."
3. Steps in the procedure
   a. Request is made during the discussion period of a motion, generally. Member may interrupt a speaker-but often matter is not that important. Member rises and says "Mr. Chairman, I rise for information."
   b. Chairman says "State what you wish."
   c. Member says "I should like to know how much money we have in our treasury." Requests are always answered through the chairman.
   d. Chairman says "Mr. Jones (The treasurer) would you tell us how much money there is in the treasury?"
   e. Treasurer rises and says "Mr. Chairman, we now have $35.17 in the treasury.
4. No vote.

H. Refer to a Committee

1. Definition - a small group of individuals is delegated to investigate a proposal or make the necessary detailed arrangements to carry out a motion: as investigating the need for a recreational program, or working out the arrangements for a picnic.
2. Proper phraseology "I move that a committee of three be appointed by the chairman to take care of our party arrangements."
3. Steps in procedure.
   a. Proposed during discussion period of motion or after a motion has been passed.
   b. Member rises, addresses chairman, and waits for recognition by chairman.
   c. Chairman recognizes member.
   d. Member states motion, "I move that the problem be investigated by a committee of three appointed by the chairman.
   e. Motion seconded.
   f. Chairman states motion to group.
   g. There is no debate except that concerning number of Committee members or how they shall be selected.
   h. Chairman takes vote.
   i. Chairman announces vote.
4. Vote required majority.

I. Lay on the table.

1. Definition - this motion sets aside the motion before the house for later consideration.
2. Proper phraseology "Mr. Chairman, I move that we lay the motion concerning our gifts to the Red Cross on the table," or Mr. Chairman I move that we table the motion concerning our gift to the Red Cross."
3. Steps in the procedure.
   a. Proposed during the discussion period of a motion only. Member rises, addresses the chairman, waits for recognition.
   b. Chairman recognizes member.
   c. Member states motion.
   d. There is no discussion of a motion to lay on the table, if the motion is seconded the chairman takes the vote immediately.
   e. Chairman announces result of the motion to lay on the table.
4. Vote - majority.

J. Take from the Table.

1. Definition - This motion brings up for consideration a motion previously set aside or put on the table.
2. Proper phraseology "I move to take from the table the motion concerning our gift to the Red Cross."
3. Steps in the procedure.
   a. Member rises and addresses the chairman
   b. Member is recognized by the chairman
   c. Member states motion
   d. Motion is seconded
   e. There is no discussion of the motion to take from the table,

if the motion is seconded the chairman takes the vote immediately.

f. Chairman announces the results of the vote.

4. Vote - Majority. A motion may be taken from the table at the same meeting in which it has been laid on the table only if other business has transpired or it may be taken from the table at the next meeting. After that, it is a dead motion, and if it is to be brought up again it must be proposed as an entirely new motion.

K. Withdraw a motion.

1. Definition - to retract, recall or take back a motion proposed. Circumstances show that it is unwise.
2. Proper phraseology "I wish to withdraw my motion concerning the party this week end."
3. Steps in the procedure
   a. Proposed only during the discussion period of a motion and proposed only by the individual who made the original motion.
   b. Member rises addresses the chairman.
   c. Chairman recognizes member.
   d. Member states "I wish to withdraw my motion concerning the party this weekend."
   e. Chairman says "Is there any objection?" If there is no objection to the member withdrawing his motion, the chairman says "the motion is considered withdrawn."
   f. However, if one member does not believe the other member should withdraw his motion he says "I Object."
   g. Another member then says "I move that Mr. Jones be permitted to withdraw his motion.
   h. The chairman then says "All in favor of the motion that Mr. Jones be permitted to withdraw his motion please say "Aye" Contrary same sign.
   i. Chairman announces vote.
4. Vote necessary - majority

L. To adjourn

1. Definition - motion to end the present meeting.
2. Proper phraseology - for unqualified form it is "I move that we adjourn." For qualified form "I move that we adjourn at 3 p.m."
3. Steps in the procedure.
   a. Member rises, addresses the chairman and awaits for recognition.
   b. Chairman recognizes member.
   c. Member states motion "I move that we adjourn."
   d. Motion is seconded.
   e. There is no discussion. The chairman says "It has been moved and seconded that we adjourn. All those in favor please say "Aye" Contrary same sign.
   f. Chairman announces vote. The group is not adjourned until the chairman announces that the meeting is adjourned. Therefore, members should not make movements of leaving until dismissed.
4. Vote Necessary - majority.

OUTLINE OF CONSTITUTION RULES AND GENERAL REQUIREMENTS

The items (marked with asterisks) below are the criteria for MTC organization constitutions which will be presented to all student organizations on campus. They were drawn up jointly by a SLIC subcommittee and the Organizations Committee of University Student Government.

In order that all students will have equality of opportunity to qualify for any student organization on the MTC campus and to reap the maximum benefits from membership in such organizations, it is felt that the basic laws, constitutions, charters, or any such designated documents of all student organizations shall include at least the following provisions.

CONSTITUTION

Preamble

States the purpose and aims of the group.

Article I - Name

States the name of the organization.

Article II - Membership

States the requirements and size limitation, if any. Active membership must be limited to persons officially connected with MTC. One must be a student to be an active member of any student organization. One must be an active member to be an officer of any student organization.

*The organization must state that all students of MTC, without regard to race, color, creed, or national origin, have equality of opportunity for membership in the organization; or, in place of this type of statement, the organization must make a statement of membership whereby all students satisfying a specific criteria of membership not based upon race, color, creed, or national origin shall be able to join the organization.

*Qualifications for membership should be clearly written so that a student may determine whether he is eligible to file application.

Article III - Officers

Contains the list of officers and their term of office in the group.

*It should be up to each organization to state the qualifications for its officers.

*The constitution should also contain a statement of when and how often elections are to be held, giving definite dates for terms of office and stating specifically the powers of each officer. (Usually stated in the by-laws)

*Appropriate provisions should be defined for the impeachment and removal of officers.

Article IV - Executive Committee

States the make-up of the executive committee (board or council), the method of their selection, and their term of office. Provision for vacancies of officers of other executive members may be included in a section under this article.

Article V - Faculty Advisers

*Where the choice of advisers is left to the organizations, provisions for election and term of office of same should by clearly stated as prescribed in the officer's clause.

Article VI - Meetings

States the regular meeting time and provisions for calling special meetings. If meetings cannot be held regularly, authority to call meetings may be stated here.

*Each organization is asked to cite the source used in resolving questions relating to procedural matters, such as Robert's Rules of Order. (Usually stated in the by-laws)

Article VII - Amendment

Requires previous notification, also a two-thirds or three-fourths affirmative vote of those present and voting, or of those present for its adoption.

Article VIII - Ratification

May or may not be necessary. If more than a majority of those present is desired, a special article should be included.

By-Laws

Sections of the by-laws deal with the following:

1. Detailed material concerning members, that is, rights, duties, resignation and expulsion procedures.

2. Provision for initiation fee, if any dues and assessments should be covered here, also details regarding delinquencies.

3. Date and method of electing officers and duties of the officers.

4. Duties, authority, and responsibilities of an executive committee.

5. The names of the standing committees and the method of choosing chairmen and committee members. The duties of the committees should also be stated.

7. The number constituting a quorum.

8. Provision for honorary members or honorary officers if the group so desires. (Usually stated to provide for non-MTC student members.)

9. A method to amend the by-laws, usually a majority vote.

Amending the constitution should not be too simple a process, for the sake of stability of the group. It should be possible to amend the by-laws with greater ease. The constitution should always carry the date it was last revised. It is a good idea to insert in parentheses after an amendment the date it was passed.

The committee is well aware that these are not all of the essentials for a constitution, but it is also mindful that its duty is not to write constitutions nor to unnecessarily encroach upon the autonomy of such organizations.

Rather, the committee considers it its task to make certain that student organizations conform to the basic policies of the institution and to safeguard the right of all students to enjoy the advantage of membership in such organizations.

These recommendations are based upon the premise that the existence of any student organization of the campus depends upon such organization continually serving in the well-rounded intellectual, cultural, and social development of the individual student, and its existence does not depend, or at least should not depend, on any other basis.

Adopted February 14, 1958

Amended February 23, 1966

RESPONSIBILITIES OF COMMITTEE CHAIRMAN

1. Discuss with the Vice President a broad outline of objectives concerning your committee for the coming year.

2. Set up your own outline on how you intend to accomplish these objectives and distribute a syllabus to each of the committee members.

3. Assemble a list of the members of your committee with addresses and phone numbers and distribute this list to all of your committee members. Add to this list job descriptions for each of the committee members' positions.

4. Set up a schedule for regular committee meetings. These meetings should be called at the disgression of the chairman. Postcards can be obtained by the secretary for use as meeting notes.

5. The success of your committee rests completely with you. Get your members started on specific jobs immediately. It cannot be stressed enough that the members of your committee must be constantly working toward the actual committee objective. In past cases, one of the greatest leadership problems was assuming a statement to be fact without thoroughly researching it. Use your committee to turn assumptions into facts. When assigning work, be sure to record who the work was assigned to and date by which assignment must be completed. Be sure to inform your members that if a problem arises that may prevent the completion of the assignment, in accordance with the assigned date, that you should be contacted at the earliest possible time, whereas the problem may be rectified without disrupting the initial committee outline and other committee assignments.

6. "Committee Memos" should be used as mail communication to relay future information and reminders to your committee members.

7. You should have an outline set up prior to each committee meeting in order to assure the progress of a smooth running committee meeting.

8. Keep accurate records of all work accomplished and all problems connected with them for future reference. The Vice President should be provided with a monthly report concerning the committee's progress. This report should be produced in quadruplicate. It is advisable to appoint a member of your committee as a secretary to assist you in this and to keep minutes of any committee meeting you may have.

9. You will be contacted as to the time, date, and place of the Executive Committee meetings. All chairmen are members of the Executive Committee and are expected to attend these meetings as part of their overall responsibility.

10. If you lose contact with your committee members at the first several meetings, it is because they lack a certain degree of motivation. It is also your responsibility to provide this motivation for all your committee.

District I Technical Institute

-- STUDENT ACTIVITIES CALENDAR --

calendar

Monday, October 18

1:30 P.M. - TOUR: Owen-Withee High School Students
**FLAG FOOTBALL TOURNAMENT BEGINS - See Recreation News or Bulletin Board
7:00 P.M. - John Birch Society Meeting (103) - Public Invited

Tuesday, October 19

8:00 - 3:30 - Movie: Communication Skills
8:00 A.M. - Student Government Executive Officers Election (111)
**4:00 P.M. - W.T.C.C. Bowling (Wagner's) - Intramural Bowling (Wagner's)
*7:30 P.M. - Women's Forum (103)

Wednesday, October 20

1:00 P.M. - TOUR: Elk Mound Seniors
**4:45 P.M. - Flag Football Championship Game

Thursday, October 21

ACTIVITY PERIOD MEETINGS
Deca (Middle Gourmet)
*Drama Club (226)
Sportmen's Club (116)
*T & I Club (103)
Vets Club (North Gourmet)
*3:30, 5:30, 7:30 - Movie: "Rebecca" (103)

Friday, October 22

8:00 - 3:30 - Movie: Communication Skills (103)

*See Announcements
**See Recreation News

announcements

DRAMA CLUB

The Drama Club is having an organizational meeting on Thursday, October 21, during the activity period. All students interested are urged to attend. The meeting is scheduled in Room 226.

REBECCA

Laurence Olivier, Joan Fontaine, Judith Anderson, George Sanders, Nigel Bruce

From Alfred Hitchcock, master of suspense, comes the master suspense thriller of them all! This Academy Award winner has been adapted from the famed noved by Daphne

recreation

INTRAMURAL BOWLING STANDINGS

TEAM	W	L
Vets Won	11	1
Bogie	11	1
Strikebreakers	11	1
Crispy Critters	9	3
Playboys	7	5
West Ballers	7	5
Nader's Raiders	7	5
Water Street	6	6
Pinbusters	6	6
Guys	3	9
Vulcher Squadron	3	9
Big Four	2	10
Seagram's 4	1	11
Vets Four	0	12

1st High Team, 3-Games	Crispy Critters	1802
2nd " " "	Strikebreakers	1759
3rd " " "	Strikebreakers	1722

1st High, Team Game	Crispy Critters	681
2nd " " "	Strikebreakers	639
3rd " " "	Vets Won	621

1st High, Ind. 3-Games	Heimstead	549
2nd " " "	Yourchuck	504
3rd " " "	Carl, F.	485

1st High, Ind. Game	Heimstead	235
2nd " " "	Price	205
3rd " " "	Loewenhagen	194

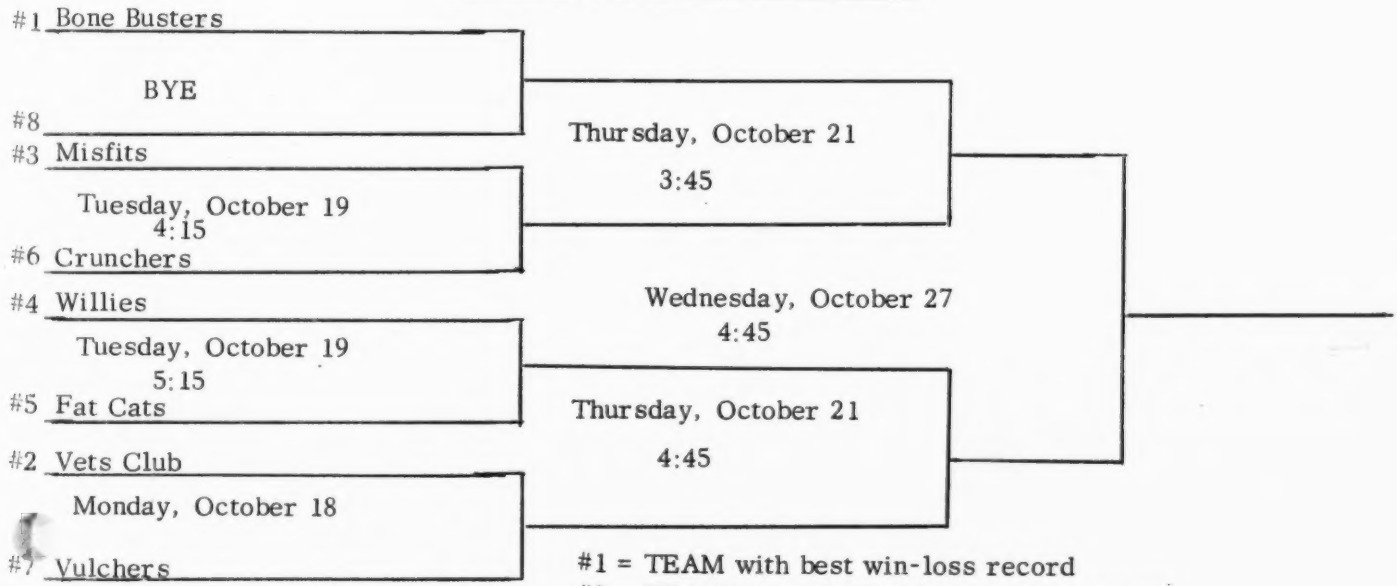
W.T.C.C. BOWLING

Men's Division	1st	2nd	3rd	Total
Beaver Dam	615	645	671	1931
Eau Claire	659	777	726	2163

Next Week's Bowlers

Men's Division	Women's Division
Frank Heimstead	Jan Dunholt
Gerry Eide	Ginny Eskilsen
Randy Kleven	Jackie Ottman
Tom Matousek	Vicky Sischo
Steve Yourchuck	Annette Gilbertson

FLAG FOOTBALL TOURNAMENT



#1 = TEAM with best win-loss record
#2 = TEAM with second best win-loss record
Etc.

Du Maurier. Story concerns a young bride who comes to a mysterious manor in England. There she finds that the memory of her husband's first wife haunts her and she tries to discover the secret locked in her husband's heart of what has happened to her. Events take a terrifying pace and the result is one of the great transformations of a work of literature to the screen.

BADGER - MINNESOTA FOOTBALL GAME

The powder-puff football team, the Tech Bombers, are sponsoring a bus trip to the Minnesota-Wisconsin Football Game on November 20. The cost of the trip will be $10 (includes bus ride and tickets). You must sign up by Friday, October 29.

If enough students do not sign up, all moneys will be returned.

T & I CLUB

There will be a T & I Club organizational meeting on Thursday, October 21, in Room 102. All students in the T & I areas are invited to join.

The purpose of the club will be explained at this meeting. Mr. Gilbertson, Metals Instructor, will serve as the advisor.

SCHOOL SHIRTS AVAILABLE

The Tech Vets' Club has ordered "Tech" sweat and T-shirts which may be purchased through the school bookstore for $3 each. Samples are displayed in the Marketing Department display window.

WOMEN'S FORUM OFFERS SECOND SPEAKER

"Causes and Cures for the Common Marriage," will be the topic addressed by Dr. William T. Brown, professor in the Psychology Department at UW-EC, Tuesday, October 19. Tickets to this presentation at 7:30 p.m. in the Demonstration Center are $1 at the door or $3 for the entire season of seven remaining programs. Mrs. Maybelle Brechlin, organizer of the project, points out that students may attend free by presenting their ID's.

1971-72 STUDENT GOVERNMENT REPRESENTATIVES

John Bates
Jeff Brunn
Timothy S. Erickson
Richard Todd Gilbert
David A. Girtman
Kathy Glidden
Charles H. Hawkinson
Delma Howell
Daniel Kirsch
Gerald B. Mattson
Mike Nogel
Judy Quirk
Raymond A. Schmahl
Kathy Sinz
Cindy Spangberg
Keith Stuttgen
John E. Sudmeier
Mark Warns

EMPLOYMENT NEWS

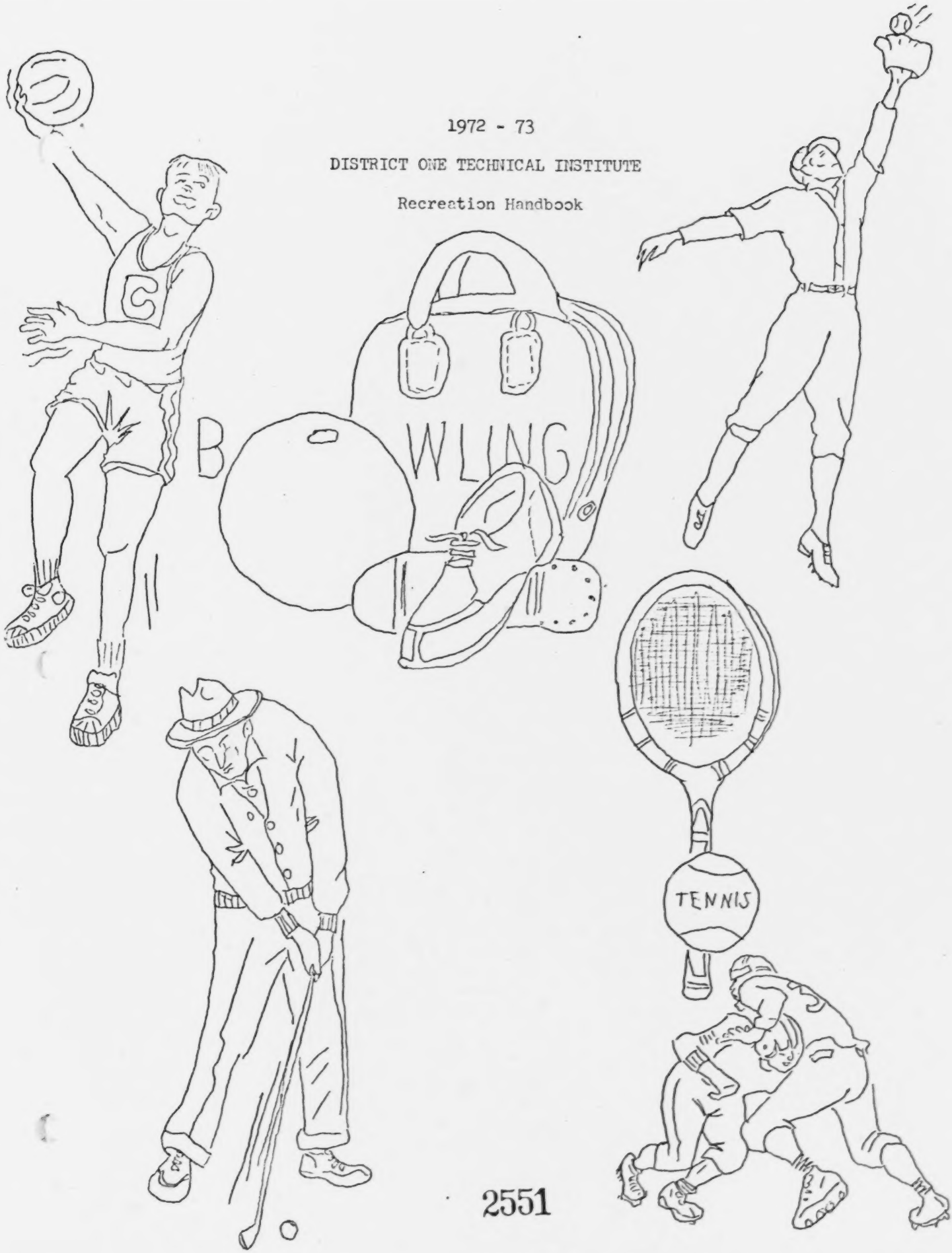
Training	Job Description	Qualifications	Location	(Office use) Number of Applicants
Medical Laboratory Assistant	Laboratory assistants	-----	Springfield, IL	
Mechanical Design Drafting	Designing medical gas distribution systems for hospitals	Associate Degree in machine design	Madison, WI	
Medical Laboratory Assistant	CLA - urgent need!!	-----	Hamburg, IA	
Any PART-TIME	Office cleaning once a week	Male	Eau Claire	
Any PART-TIME	Cook; 8:30 a.m. to 3:30 p.m.	-----	Eau Claire	
Mechanical Design Drafting; Industrial Drafting; Electronics Technology	Drafting	-----	Northlake, IL (Chicago area)	
Medical Laboratory Assistant	Routine clinical laboratory procedures	Ability to cross-match blood is absolute necessity	South Haven, MI	
Any PART-TIME	Babysitting for 6 children; oldest is 8 years; 2:30 to 6	-----	Eau Claire	
Appliance Servicing	Service appliances	-----	Sun Prairie, WI	
Data Processing Machine Operator	Clerk, keypunch, machine operator	-----	Eau Claire	
Any PART-TIME	Ironing, housecleaning; afternoons	-----	Eau Claire	
Any PART-TIME	Janitor; 6 a.m. to 9 a.m.	-----	Eau Claire	
Any PART-TIME	Scraping and painting outside of house; work Mon., Wed., Thurs., or Sat., or any combination of these days	Male	Eau Claire	

If you are interested in any of the above jobs, see Mr. Anderson in the Placement Office, Room 105, or call 834-3171, extension 74. Please inform us when you have accepted a position.

1972 - 73

DISTRICT ONE TECHNICAL INSTITUTE

Recreation Handbook



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Recreation Directory

Director of Student Activities.....Mr. Arthur Kopp

Recreation Supervisor.....Mr. Jim Severson

Student Center Supervisor.....Mr. Fred Miller

Men's-Student Recreation Coordinator.....Mr. Mark Mikila

Women's-Student Recreation Coordinator.....Miss Vicki Sischo

Secretary-Work Study.....Miss Jackie Ottman

Phone Number.....834-3171 Extension 73

Address: 620 W. Clairemont Avenue
Eau Claire, WI 54701

Student Center Activities

Various recreational equipment is available for student use in the Student Center (Room 6). This equipment includes:

Badminton Sets
Basketballs
Cards
Checkers
Chess
Cribbage Boards
Dartball
Foosball
Football Equipment
Horseshoes
Jarts
Ping Pong Tables
Pool Tables
Softball Equipment
Tennis Racquets & Balls
Volleyball Equipment

Check-Out Service

All full-time students are eligible to check out equipment for a 24 hour period. Each student is required to exchange his I.D. and sign out the equipment with Mr. Fred Miller. Upon return of the equipment the I.D. is returned to the student.

Tournaments

During the academic school year tournaments will be held by the recreation department for both men and women. Trophies are awarded for first place and runner-up. Each participant is required to pay an entry fee 25¢ per tournament. The tournaments include:

Men	Women	Co-Ed
Badminton	Badminton	Checkers
Dartball	Ping Pong-Singles	Chess
Foosball	Ping Pong-Doubles	Cribbage- Singles
Horseshoes	Pool: 8-Ball	Cribbage- Doubles
Ping Pong-Singles	14-1	Foosball
Ping Pong-Doubles	Straight Ball	Ping Pong-Doubles
Pool: 8-Ball		
14-1		
Straight Ball		
Tennis		

2554

T.V. Area

Students are cordially invited to watch colored T.V. in the Recreation Center during the school day. This area, adjoining the game room, may also be used for playing cards or simply chatting with fellow students.

On Monday nights, during first semester, the T.V. and game room will be open from 7:00 until 11:00 p.m. Students may watch the Monday night football games or play a game of pool, ping pong, etc.

Philosophy

Recreational activities at District One are recognized as an intergral part of a students "total" education. The combination of academic study and an opportunity to enrich their leisure time is beneficial to the student and the over-all atmosphere of the student body.

The main objectives of the recreation program are to:

1. Provide enjoyable and healthy types of recreational activities during the concentrated academic school day.

2. Provide a means in which co-educational activities may be promoted.

3. Provide activities that will carryover for the students after they graduate from District One.

4. Create a "happy atmosphere" for the present student body at District One.

5. Create interest and promote competition through hosting tournaments in which all students may participate.

RULES AND REGULATIONS FOR THE STUDENT CENTER

No foods or beverages are allowed in the Student Center.

No smoking in the ping-pong area.

No games of chance allowed in the Student Center.

Students must check out and check in equipment with the Student Center Supervisor--ID cards may be requested.

All equipment must be checked in at the close of each school day.

Equipment and furniture must be left arranged and used properly.

Chairs are not to be used as footstools.

Pool tables and ping-pong tables are to be used on a "first come, first serve basis". Special regulations will be established for special events.

The Student Center is not a place for sleeping.

We expect students to abide by all of the above regulations.

Students maliciously or deliberately destroying anything in the Student Center will be required to pay for same. This action along with derogatory conduct will be cause for dismissal from school. (See Student Handbook)

Keep this a Student Center that you can be proud to visit!

STUDENT GOVERNMENT

1971 - 72

STUDENT CENTER RECREATION

Activity	Participation
Checkers	2
Cribbage Tournament	22
Cribbage Tournament (Doubles)	16
Foosball Tournament	36
Ping-Pong Tournament(Singles)	21
Ping-Pong Tournament (Doubles)	16
Ping-Pong Tournament (Co-ed)	8
Pool Tournament (8-Ball)men	43
Pool Tournament (8-Ball) women	11
Pool Tournament (14-1) men	58
Pool Tournament (14-1) women	4
Tennis Tournament	6
TOTAL	243

2557

Intramural Activities

During the 1972-73 school year an extensive intramural program shall be offered to all students enrolled at District One. These programs include:

Men	Women
Basketball	Basketball
Dartball	Powder Puff Football
Football (Flag)	Softball
Softball (Slo or fast pitch)	

Co-ed

Bowling

Swimming

a Open Swimming

b. Beginning Swimming

c Intermediate Swimming

d Beginning Diving

e Intermediate Diving

Volleyball

Eligibility

(1) Each participant must be enrolled as a full-time student at District One.

(2) A student is not eligible for an intramural activity if he is a member of a varsity team.

(3) No student may participate on more than one team in any individual sport. However, if his team drops out of the league he is elegible to transfer to another squad.

(4) Team managers may drop or add players to the roster after league competition begins. However, the new player must not be a member of another squad.

(5) Any team that uses a ineligible player must forfeit the games in which he participated.

Captains

(1) Captains are responsible to make sure all team members are eligible to participate in league play.

(2) Captains are responsible for getting rules, schedules, and other materials to their teammates.

(3) Captains are responsible for attending meetings that are held by the recreation department. Except for bowling they will be held at school during the activity period on Thursday.

(4) Captains are responsible for collecting and turning in the accessed entry fees to the recreation department.

(5) All protests must be turned in by the Captains within 24 hours of the intramural contest being protested.

2559

Unsportsmanlike Conduct

A. Disrespect Toward Officials

Any player addressing an official in an unsportsmanshiplike and discourteous manner disqualifies himself immediately for the remainder of the game. The official will give the offender's name to the Intramural Director, and the offender will be put on probation. A second ejection shall result in disqualifications from that sport for the remainder of the season.

B. Shoving or Striking an Official

This shall result in suspension for the remainder of the school year (minimum).

C. Penalty for Becoming Involved in a Fight

The penalty for becoming involved in a fight will be a two (2) week suspension (of league play) from all intramural sports (minimum) to ejection for the remainder of the year. (Note: the Intramural Council and/or the Director of Intramural Sports shall review the case).

D. Derogatory Remarks of Acts

The referee shall have the power to warn or disqualify for the game or match any player, substitute, coach, or manager who commits, in the referee's opinion, any of the following gross violations of sportsmanship.

1. Persistently addressing the officials in regard to decisions.
2. Making derogatory remarks about or to the officials.
3. Committing acts derogatory to the officials or tending to the officials or tending to influence their decisions.
4. Making personal and derogatory remarks about or to opponents.

2560

Entry Fee

Each team participating in any intramural league shall pay an entry fee to join the league. These fees, in return, shall be used to buy awards for the individual league and tournament champions.

Equipment

All athletic equipment for league play will be provided through the recreation department. Students are requested that they take care of the equipment and use them in a normal manner.

The equipment will be available at the sight of league play 15 minutes before the start of each event.

Injuries

Students injured in intramural contest shall be given emergency care at Sacred Heart or Luther Hospital. However, the student assumes all financial obligation. Participation in all intramural activities is strictly voluntary. District is not responsible for injuries incurred while participating in intramural. Students are urged to carry some type of health and accident insurance.

Scheduling

All league schedules shall be done by the recreation department. The department, when possible, shall try to schedule teams around late classes, field trips, etc. However, each team is responsible for requesting a certain time one week in advance of the event.

2561

Tournaments

Post-season tournaments shall be held at the close of each intramural league schedule. All teams will be invited to participate. The schedule shall put the teams with the best over-all record against the teams with the poorest in the opening rounds. (ie. 1 v 8, 2 v 7, 3 v 6).

Awards

Trophies shall be awarded to all individuals on a league or tournament championship team. Also, outstanding individual performances will be recognized through trophies for making M.V.P. or an all-star team.

Traveling team trophies are awarded for place in football, basketball, softball, dartball, and volleyball.

2562

Philosophy

The intramural sports staff believes that participation in the competitive experience fulfills a basic need in the student's education. Believing in the value of the wholesome physical competitive activity, the intramural sports staff realizes the following as their objectives:

1. To offer a variety of activities, balanced between vigorous and light exercise and team and individual sports to meet present interests and future needs.

2. To reasonably safeguard health by choice of activities, medical counseling, safety rules, good equipment, and proper supervision.

3. Believing that social relations and attitudes can be developed through intramural participation by upholding high standards of sportsmanship, fair dealing with all individuals and groups, and providing multitudes of opportunities for leadership and cooperation.

4. To equalize competition by scheduling teams of similar playing ability.

5. To provide facilities, leadership, officials, and constant supervision in order for the participants to receive maximum benefit from the sports program.

2563

1971 - 72

INTRAMURAL PROGRAM

Activity	Participation
Basketball	110
Bowling	85
Flag Football (men)	120
Touch Football (Women)	15
Softball (Fast-Pitch) men	70
Softball (Slo-Pitch) men	98
Softball (Slo-Pitch) women	30
Volleyball (co-ed)	36
Beginning Swimming	6
TOTAL	570

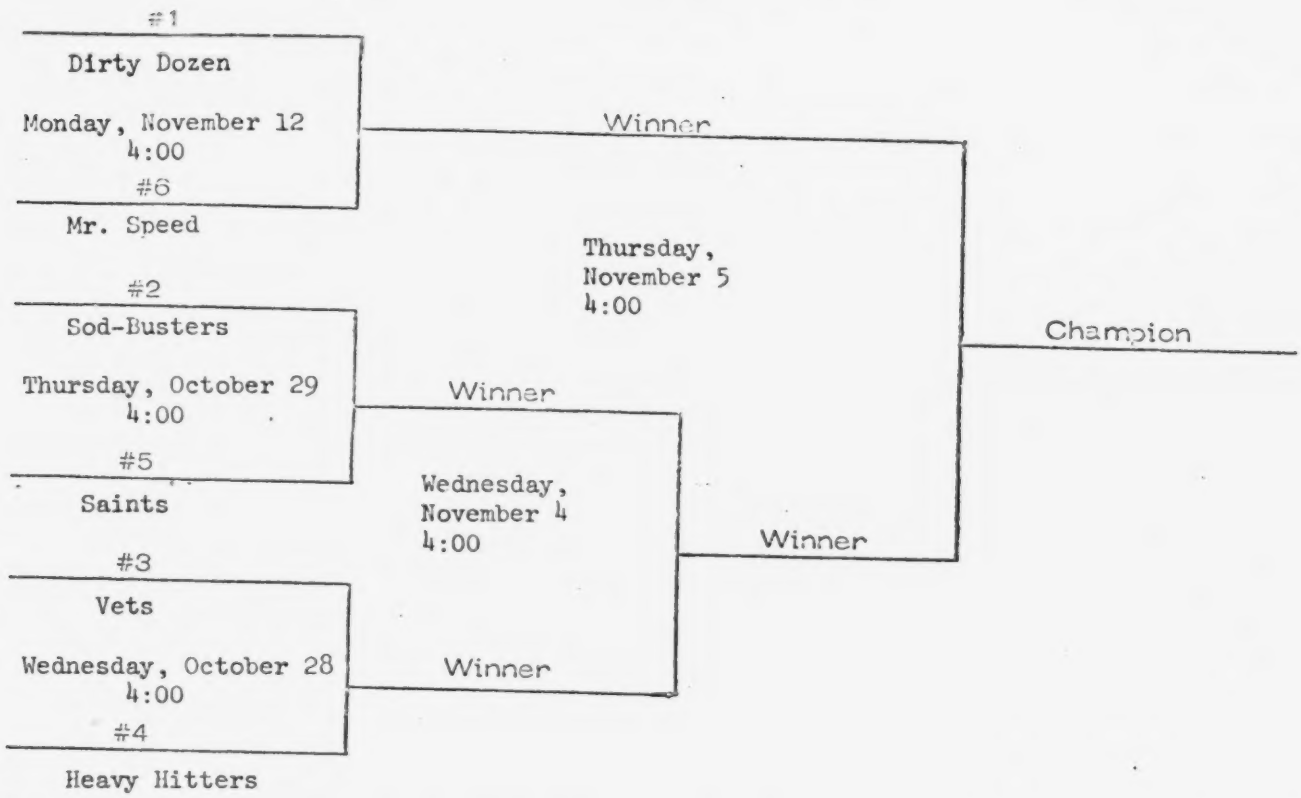
2564

1972 - 73
Tentative Calendar

Sport	Entry Deadline	Captains Meeting	Play Begins
Powder Puff Football	Sept. 6	Sept. 7	Sept. 11
Intramural Football (Men's)	Sept. 6	Sept. 7	Sept. 11
Horse Shoe League	Sept. 8		Sept. 11
Intramural Bowling	Sept. 20	Sept. 21	Sept. 26
Straight Ball Pool Tournament	Oct. 6		Oct. 10
Swimming and Diving	Oct. 13		Oct. 25
Intramural Basketball and Wrestling	Oct. 18	Oct. 19	Oct. 25
Cribbage Tournament	Oct. 20		Oct. 23
Dartball and Volleyball	Oct. 25	Oct. 26	Oct. 26
Co-ed Foosball Tournament	Nov. 10		Nov. 14
8-ball Pool Tournament	Nov. 29		Dec. 1
Checkers Tournament	Dec. 1		Dec. 5
Singles Ping Pong Tournament	Dec. 1		Dec. 5
King & Queen Candidates	Dec. 20		
Intramural Bowling	Jan. 17	Jan. 23	Jan. 23
Immediate Swimming and Diving	Feb. 2		Feb. 7
14-1 Pool Tournament	Feb. 28		March 1
Chess Tournament	Feb. 28		March 1
Intramural Softball Men's & Women's	April 11	April 12	April 24
Horse Shoes	April 11		April 24
Tennis Tournament	April 27		April 30

2565

FOOTBALL TOURNAMENT



* Numbers are based on final standings, i.e. 1 = first place; 2 = second place, etc.

Saints

Final Team Standings

Team	W	L
Dirty Dozen	6	2
Sod-Busters	6	3
Vets	4	3
Heavy Hitters	4	4
Saints	3	5
Mr. Speed	1	7

2566

MEN'S

- INTRAMURAL BASKETBALL -

LEAGUE MEMBERSHIP - The league will consist of the first eight teams to turn in a roster and entry fee to Mr. Severson, Student Center.

TEAM ROSTER - Each team will consist of a minimum of eight players and a maximum of twelve. No player may compete for more than one team. All rosters must be turned in by Wednesday, October 27.

CAPTAINS' MEETING - On Thursday, October 28, there will be a Captains' Meeting in Room 233 to discuss scheduling, rules, etc.

LEAGUE GAMES - All league games will be held at Memorial on Wednesday evenings between 6:45 p.m. until 10:00.

UNIFORMS - All students participating are required to wear a t-shirt. These shirts will be issued and be included in the entry fee.

TROPHIES - Awards (trophy case) will be presented at the close of the year for team champions, an all-star team, and high scorer.

ALL-STAR TEAM - At the end of the basketball season, a ten man, all-star team will be selected. These players will represent District One in the Y.M.C.A. Invitational.

ENTRY FEE - Each team shall pay a $20 entry fee to enter the league. No money shall be refunded at the end of the year.

INTRAMURAL BASKETBALL

Team Name_____

Captain_____ Telephone_____

1._____ 7._____

2._____ 8._____

3._____ 9._____

4._____ 10._____

5._____ 11._____

6._____ 12._____

Sample

2567

VT 017 715

BICE, GARRY R.;GREEN, GARY D.

THE STATUS OF VOCATIONAL-TECHNICAL EDUCATION IN THE SECONDARY SCHOOLS (1972).

TENNESSEE OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, KNOXVILLE. TENNESSEE STATE DEPT. OF EDUCATION, NASHVILLE. DIV. OF VOCATIONAL-TECHNICAL EDUCATION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - JUN72 142P.

DESCRIPTORS - STUDIES; *GRADUATE SURVEYS; STATE SURVEYS; *FOLLOWUP STUDIES; *VOCATIONAL EDUCATION; VOCATIONAL HIGH SCHOOLS; *SECONDARY EDUCATION; *PROGRAM EFFECTIVENESS; VOCATIONAL FOLLOWUP
IDENTIFIERS - *TENNESSEE

ABSTRACT - TO DETERMINE THE EFFECTIVENESS AND PRESENT STATE OF SECONDARY VOCATIONAL EDUCATION PROGRAMS IN TENNESSEE, TWO FOLLOWUP STUDIES WERE DONE ON 89,240 STUDENTS FROM 375 SCHOOLS. ALL PARTICIPANTS HAD SUCCESSFULLY COMPLETED AT LEAST ONE PROGRAM DURING THE 1970-71 TERM. THE FIRST FOLLOWUP FOCUSED ON STUDENTS' CHARACTERISTICS, ATTITUDES, AND ECONOMIC CONDITIONS, WHILE THE SECOND CONCERNED ITSELF WITH THEIR OCCUPATIONAL STATUS. ALL DATA WERE BASED ON INFORMATION REPORTED BY TEACHERS. RESULTANT FINDINGS INCLUDE THE FOLLOWING: (1) FROM TWO TO 13 VOCATIONAL PROGRAMS OPERATE IN EACH OF THE 12 COUNTIES, (2) THE AREA OF TRADE AND INDUSTRY INCREASED MORE THAN ANY OTHER VOCATIONAL AREA DURING 1971-72, (3) OF THE TOTAL STUDENTS ENROLLED IN PROGRAMS, 70 PERCENT WERE WHITE AND 28 PERCENT BLACK. FEMALES ACCOUNTED FOR 60 PERCENT OF THE POPULATION, (4) THE MAJORITY OF STUDENTS ENROLLED WERE NINTH AND TENTH GRADERS, (5) A LITTLE OVER HALF OF THE STUDENTS ENROLLED HAD NO PLANS OF CONTINUING CLASSROOM STUDY BEYOND THE HIGH SCHOOL LEVEL, (6) BOTH HANDICAPPED AND DISADVANTAGED PUPILS WERE ENROLLED, AND (7) OVER 60 PERCENT OF THE FORMER STUDENTS INVOLVED WERE EMPLOYED IN FIELDS RELATED TO THEIR TRAINING, AND ONLY 16 PERCENT WERE UNEMPLOYED. TABLES AND GRAPHS SUPPLEMENT THE REPORT. (SN)

VT 017 715

TENNESSEE
ADVISORY COUNCIL ON
VOCATIONAL EDUCATION

The Status of Vocational-Technical Education in the Secondary Schools

DIVISION OF
VOCATIONAL-TECHNICAL
EDUCATION

1972

VT017715

2569

THE STATUS OF VOCATIONAL-TECHNICAL EDUCATION IN THE SECONDARY SCHOOLS (1972)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Prepared For:
Tennessee Advisory Council on
Vocational Education

and

Division of Vocational-Technical
Education

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UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE

June, 1972

2570

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Page

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2572

ACKNOWLEDGMENTS

We gratefully acknowledge the support given this project by both the Tennessee State Advisory Council on Vocational Education and the Tennessee State Division of Vocational-Technical Education. We also wish to thank all teachers and administrative personnel upon whose cooperation and good will the success of this project depended. We would like to express our appreciation to Virginia Patterson of the University of Tennessee Computer Center for her sincere efforts and assistance. Special recognition is given to the members of the staff for their efforts and diligence above and beyond the call of duty.

The staff of this project consisted of the following persons:

Bob Clater
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ABOUT THE STUDY

All data represented in this report are supported by names and addresses of students and teachers.

Data for the follow-ups were gathered from December through May, 1972. Student and teacher data for the 1971-72 school year were gathered April through June, 1972. It is important that the reader keep this in mind since a percentage of students who enter at the beginning of the school year leave the program for various reasons and therefore would not be included in a "point-in-time" sample taken other than in September.

The status of vocational-technical education in secondary schools in Tennessee is exemplified by the following:

1. The following table illustrates some basic vocational-technical program data about teachers, school districts, and counties as reported in the spring of 1972.*

	Ag.	D.E.	Health	H.E.(C)	H.E.(O)	Off.	Tech.	T&I
Teachers	252	126	25	476	44	158	30	523
Schools	218	105	21	286	27	124	17	136
Districts	115	56	16	125	16	68	6	79
Counties	94	42	12	91	16	39	6	63

2. 20 counties offer only 2 vocational-technical programs.

   23 counties offer 3-4 vocational-technical programs.

*All figures to include teaching aides, and other supporting personnel.

2574

16 counties offer 5-6 vocational-technical programs.

8 counties offer 10-11 vocational-technical programs.

5 counties offer 13 or more vocational-technical programs.

3. The greatest growth in number of students from 1971-72 was in the area of trade and industry. This was a 23% increase.

4. During the 1971-72 school year, 60% of the students enrolled in vocational-technical education programs in Tennessee were female.

5. The number of students in vocational-technical programs are spread fairly evenly among the high school years with a slightly larger percentage of students in ninth and tenth grade levels.

6. Approximately seventy percent of the vocational-technical students in Tennessee are white and twenty-eight percent of the vocational-technical students are black.

7. Twenty-three percent of the students enrolled during 1971-72 were in vocational-technical education courses for the first time.

8. Many vocational-technical education students plan to complete high school only (53%). Six percent plan to attend area vocational schools; one percent plan to

attend community colleges; and six percent plan to attend four year colleges.

9. Twenty-six percent of the students enrolled in vocational-technical education classes during 1971-72 were classified as disadvantaged by their teachers.[1] Teachers also classified five percent of their students as handicapped.[2]

10. About one-third (32%) of Tennessee's vocational-technical education teachers are veterans.

11. Over three-fourths (78%) of Tennessee's vocational-technical education teachers have a Bachelor's degree and twenty-four percent have a Master's degree.

12. Sixty-six percent of Tennessee's vocational-technical education teachers have five years or more of experience in education; one-fifth (20%) have twenty-one or more years in service.

Instructions to teachers were as follows:

[1]This item implies that the student is either academically or socioeconomically disadvantaged. If in your opinion, the student's performance is impaired by a significantly weaker than average educational background or if the student comes from a family with less than a $3,000 per year income, this item should be marked.

[2]This item implies that the student has been identified as mentally or physically handicapped and that this handicap significantly affects the student's performance in your class.

13. A large percentage (40%) of the vocational-technical education teachers in this state have five or more years experience in business and/or industry and ten percent have twenty-one or more years. Interestingly enough, the same percentages are applicable to "years in present position."

14. Tennessee has 132 teachers (9%) that classify themselves as part time (page 70).

15. The age distribution of Tennessee vocational-technical education teachers is excellent (pages 70 and 135).

16. Of the 1970-71 graduates followed-up in 1972, 62% were employed in a field related to their training.

17. At some time during 1972, 9,033 former Tennessee vocational-technical students were available for placement.

18. In December, 1971, 1,487 (16%) of Tennessee's former vocational-technical students were unemployed. Note: 4,420 were not available for placement.

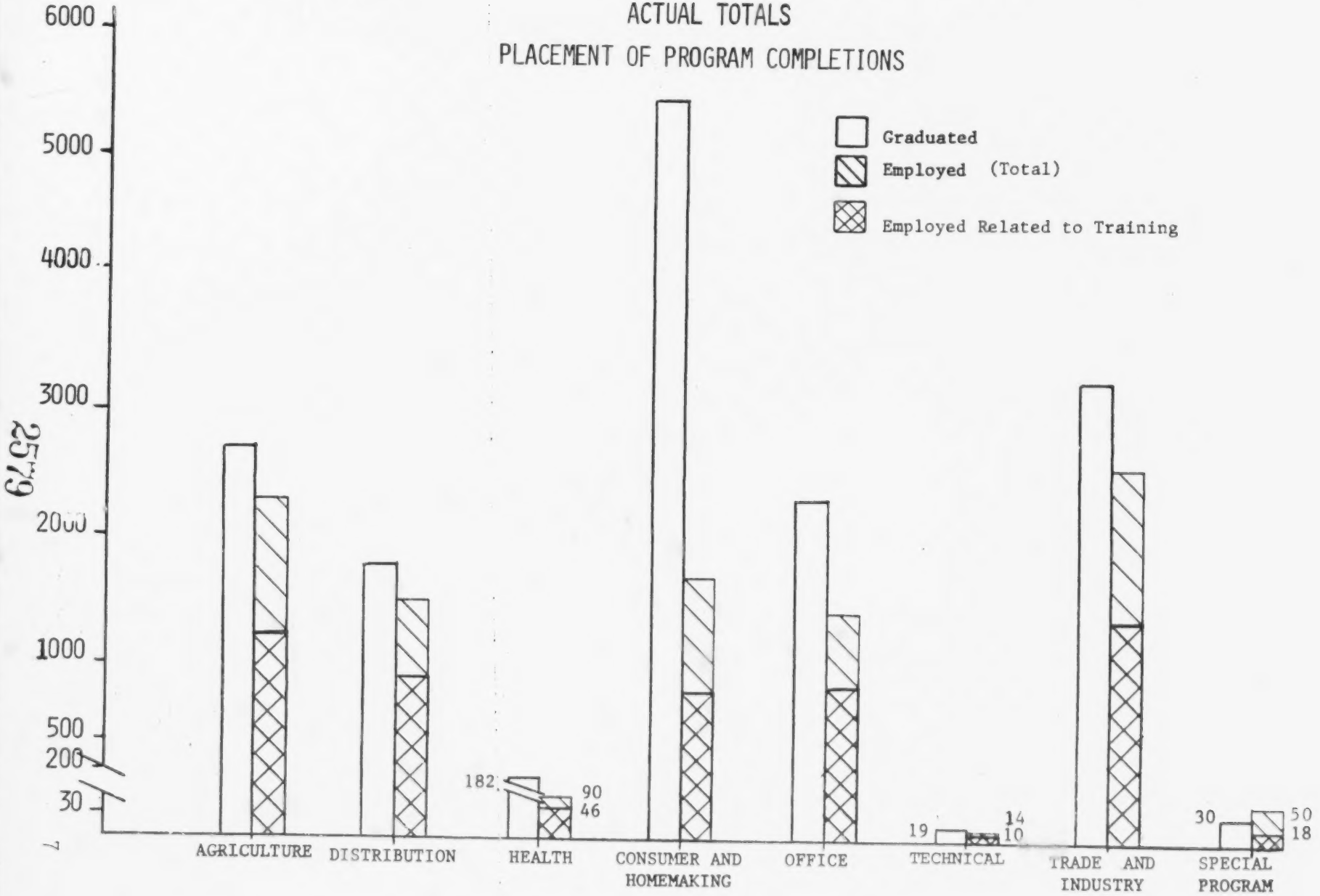
GENERAL INTRODUCTION TO FOLLOW-UP STUDY

The purpose of the Follow-Up Study was to determine the placements of students who have completed vocational education training programs. The study was based upon data from 375 schools (listed on pages 8-11) in Tennessee. The information was reported by teachers for 89,240 students who completed a vocational program in the school year 1970-71. The status reports are for the 1971-72 year.

The Placement of Program Completions graph illustrates the relationship between the total number of students completing a program in one of the eight major areas to the number of those same students employed in a related field. Each program is listed by United States Office of Education (USOE) code for each district and tallied for each county in the Placement of Program Completions in Vocational Education Programs (pages 14-41).

The chart on page 44 tallies the information supplied by teachers for 89,240 students. Based upon this information, a projection was made for the placement of the total 95,472 students who completed a vocational training program in 1970-71. The Summary of Pupil Status by USOE Code Tabulation of Single Status Codes lists each program and reports the placement status of the students who completed that program.

This chapter is not intended to give an actual account of each student as an isolate but to give a good indication of the placement status of the class of vocational students who completed a vocational program in 1970-71.


ACTUAL TOTALS
PLACEMENT OF PROGRAM COMPLETIONS
Graduated
Employed (Total)
Employed Related to Training
6000
5000
4000
3000
2000
1000
500
200
30
182
90
46
19
14
10
30
50
18
AGRICULTURE
DISTRIBUTION
HEALTH
CONSUMER AND HOMEMAKING
OFFICE
TECHNICAL
TRADE AND INDUSTRY
SPECIAL PROGRAM

SCHOOLS COOPERATING IN FOLLOW-UP OF 1970-71 VOCATIONAL-TECHNICAL STUDENTS

01842007	Oak Ridge High
01940008	Clinton Senior High
01940009	Daniel Arthur Rehab.
01940017	Lake City High
01940022	Norris High
01940030	Clinton Jr. High
02960003	Central High
03980008	Big Sandy
03980011	Central High
03980012	Holladay
04930011	Bledsoe Co. High
05821001	Alcoa High
05920016	Everett High
05920019	Friendsville High
05920021	Lanier
05920026	Porter High
05920032	Townsend
05920034	Walland
05920039	Eagleton Jr. High
06831008	Cleveland High
06930006	Bradley High
06930008	Charleston High
07940035	Jacksboro High
07940038	Jellico High
07940041	La Follette High
07940054	Wynn Habersham
08940011	Central High
09771001	Atwood High
09772002	Central High
09773002	Huntingdon High
09774002	McKenzie High
09775001	Clarksburg High
09776002	Trezevant High
10811008	Elizabethton High
10910012	Cloudland High
10910017	Hampton High
10910019	Happy Valley High
10910033	Unaka High
11960004	Central High
12970015	Chester Co. High
13920044	Claiborne Co. High
13920055	Powell Valley High
14940007	Celina High
14940008	Hermitage Springs
15910011	Cocke Co. High
15910012	Cosby
15910020	Parrottsville
16842002	E. Jr. High
16842005	Tullahoma Sr. High
16842006	W. Jr. High
16940019	Central High
16940021	Coffee Co. Jr. High
17783001	Hamlett Robertson High
17785001	Gadsen High
17881002	Alamo High
17882001	Bells High
17884001	Friendship High
17886001	Maury City
18940012	Cumberland Co. High
19950110	Antioch High
19950130	Bellevue High
19950180	Cameron High
19950195	Central High
19950220	Cohn High
19950240	Cumberland High
19950260	Donelson High
19950275	Dupont High
19950295	East Sr. High
19950325	Glencliff High
19950355	Goodlettsville High
19950435	Hillsboro High
19950440	Hillwood High
19950450	Hume Fogg Tech.
19950470	Joelton High
19950515	Issac Litton Sr. High
19950545	Madison High
19950550	Maplewood High
19950605	North High
19950615	John Overton High
19950635	Pearl Sr. High
19950705	Stratford High
19950730	Two Rivers High
20970008	Scotts Hill
20970011	Riverside High
21940014	Dekalb Co. High
22960014	Charlotte High
22960016	Dickson High
22960020	William James

Continued

23980018	Dyer Co. High
23980019	Trimble
24970010	Fayette Ware High, N.
27881002	Humboldt Jr. High
27881003	Humboldt Sr. High
27882002	Milan High
27882003	Park Ave. Jr. High
27980005	Dyer
27980007	Gibson
27980009	Medina
27980012	Peabody High
27980013	Rutherford
27980014	Spring Hill
27980016	Yorkville
28970004	Beech Hill
28970008	Elkton
28970009	Giles Co. High
28970010	Jones
28970012	Prospect
28970022	Pulaski Jr. High
29920020	Rutledge High
29920023	Washburn High
30811003	Greeneville High
30811005	Greeneville Jr. High
30910026	Chuckey Doak
30910042	North Greene
30910043	South Greene
30910044	West Greene
31940014	Grundy Co. High
33831001	Chattanooga High
33831002	Howard
33831003	Kirkman Tech. High
33831047	Brainerd High
33831050	Riverside
33831051	Alton Park Jr. High
33930011	Central High
33930021	Hixson High
33930034	Ooltewah High
33930037	Red Bank High
33930046	Tyner High
33930057	Red Bank Jr. High
33930062	Hixson Jr. High
34910021	Hancock High
35970003	Central
35970004	Grand Junction N.
35970007	Middleton
35970024	Bolivar Jr. High
36970002	Hardin Co. High
36970011	South Side
37910023	Bulls Gap
37910025	Church Hill High
37910033	Rogersville High
37910037	Surgoinsville High
39980005	Haywood Jr. High
38980008	Haywood High
39970003	Lexington High
40980007	Grove Jr. High
40980018	Henry Co. High
41970016	Hickman Co. Sr. High
41970026	Hickman Co. Jr. High
42980006	Houston Co. High
43960011	McEwen
43960012	Waverly Central High
44940029	Central High
45910004	Jefferson High
45910005	Maury High
45910008	Rush Strong
45910011	White Pine
47821008	Austin East High
47821012	Fulton High
47821014	Knox Evening Adult
47821026	Rule Jr. Sr. High
47821029	South Jr. Sr. High
47821030	Tyson Jr. High
47821031	West High
47821035	Beardsley Jr. High
47821043	Van Gilder Occup.
47821047	Bearden High
47821049	Central High
47821054	Holston High
47821071	Young High
47821073	Northwest Jr. High
47920013	Carter
47920014	Carter High
47920024	Farragut High
47920028	Gibbs High
47920031	Halls High
47920039	Karns High
47920052	Powell High
47920085	Doyle High
48980012	Lake Co. High
49980013	Ripley High
50970011	Lawrence Co. High
50970016	Loretto High

Continued

50970022	Summertown High
51970004	Lewis Co. High
52960008	Blanche
52960009	Boonshill
52960010	Central
52960013	Flintville Elem.
52960014	Flintville High
52960029	Hillcrest Voc. & Sed.
53821001	Lenoir City High
53821005	Lenoir City Jr. High
53920007	Greenback
53920011	Loudon High
54930004	Calhoun High
54930014	McMinn High
54930024	Central High
55970005	Adamsville High
55970025	McNairy Central High
56960013	Macon Co. High
56960015	Red Boiling Springs
57871002	I. B. Tigett
57871003	Central Merry
57871104	Jackson Jr. High
57871013	Merry Jr. High
57970001	Beech Bluff
57970008	North Side High
57970013	South Side High
57970040	West High
57970044	North Side Jr. High
57970045	South Side Jr. High
57970046	West Jr. High
58930027	Whitwell High
59960003	Cornersville
59960005	Forrest
59960008	Marshall Co. High
60960005	College Hill
60960006	Cullecka
60960010	Mt. Pleasant High
60960017	Santa Fe
60960018	Spring Hill
60960019	Whitthorne
62930022	Madisonville High
62930027	Sweetwater High
62930029	Tellico Plains High
62930030	Vonore
63960005	Central High
63960006	Clarksville High
63960011	Greenwood Jr. High
63960029	New Providence Jr. High
63960031	Northwest High
64960003	Moore Co. High
65940005	Central High
65940007	Coalfield
65940011	Oakdale
65940013	Sunbright
66980004	Kenton
66980008	South Fulton High
66980016	Obion Co. Central
67940023	Rickman
68970007	Perry Co. High
69940011	Pickett Co. High
70930004	Copper Basin High
70930010	Polk Co. High
71940017	Algood
71940021	Cookeville Jr. High
71940026	Monterey High
71940032	Upperman High
71940035	Putnam Co. Sr. High
72930007	Rhea Central High
72930010	Spring City High
73841003	Harriman High
73842002	Rockwood High
73940018	Midway High
73940020	Oliver Springs High
73940024	Roane Co. High
74960007	East Robertson
74960009	Greenbrier High
74960010	Jo Byrns High
74960015	Springfield High
74960022	Springfield Jr. High
75960007	Central
75960008	Christiana
75960010	Eagleville
75960012	Kitrell
75960013	Lascasaas
75960021	Walter Hill
75960033	Symrna High
75960036	Thurman Francis
76741002	Oneida High
76940029	Huntsville High
76940031	Norma
76940032	Robbins High
77930009	Sequatchie Co. High

Continued

78910031	Sevier Co. High
79891033	Larose
79891080	Klondike
79891104	Treadwell High
79891107	Oakhaven High
79891112	Corry Jr.
79891116	Porter Jr. High
79891118	Sherwood Jr. High
79891120	Lincoln Jr. High
79891123	Airways Jr. High
79891125	Carver High
79891126	Douglass High
79891127	East High
79891128	Frayser High
79891129	Hamilton High
79891131	Kingsbury High
79891132	Lester High
79891133	Manassas High
79891134	Melrose High
79891135	South Side High
79891136	Trezevant High
79891137	West Side High
79891138	White Station High
79891139	Sheffield High
79891140	Wooddale High
79891144	Northside High
79891145	Central High
79891146	Memphis Tech. High
79891147	Overton High
79891148	B. T. Washington
79891167	Mitchell Road
79891170	Geeter High
79891172	Westwood High
79891210	Fairley High
79891211	Hillcrest High
79891212	Whitehaven High
80940010	Gordonsville
80940013	Smith Co. High
82811011	Bristol Tech.
82812001	Dobyns Bennett
82812007	Sevier
82910009	Bluff City Jr. High
82910024	Holston Valley Jr. Hi.
82910026	Ketron High
82910030	Lynn View High
82910038	Sullivan High
82910049	Central High
25940015	Clarkrange High
82910050	East High
83960007	Gallatin Sr. High
83960010	Hendersonville High
83960017	Portland High
83960020	Westmoreland High
83960021	White House High
83960030	Portland Jr. High
83960031	Gallatin Jr. High
84980002	Brighton
84980004	Covington
84980011	Munford
85960002	Trousdale Co. High
86910012	Unicoi Co. High
87920025	Horace Maynard
88940013	Van Buren Co. High
89940005	Warren Co. Jr. High
89940021	Warren Co. Sr. High
90811008	Irving College
90811016	Johnson City Voc.
90910007	Boones Creek High
90910011	Fall Branch
90910014	Jonesboro High
90910016	Lamar
90910020	Sulphur Springs
90910021	Washington Col. Acad.
91970017	Collinwood High
91970020	Wayne Co. High
92980004	Dresden High
92980005	Gleason
92980019	Greenfield High
92980008	Martin High
92980009	Palmersville
93940019	Sparta White Co. High
93940023	White Co. Jr. High
94960002	Bethesda
94960004	College Grove
94960006	Franklin High
94960009	Hillsboro High
94960017	Fairview High
95940010	Lebanon High
95940016	Watertown
95940026	Mt. Juliet
23881003	Dyersburg High
23881008	Dyersburg Jr. High
27980003	Bradford
46910006	Johnson Co. High
66881002	Union City High
67940019	Livingston
75960018	Rockvale
78910039	Seymour High

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INTRODUCTION TO FOLLOW-UP STUDY

The Placement of Program Completions in Vocational Education Programs (pages 14-42) illustrates the placement of vocational education students who have completed particular vocational programs. The categories utilized to determine the placement of the students are: graduated, dropped, status unknown, not available for placement, education at a higher level, available for placement, employed in a related field, and known to be unemployed. The categories are not mutually exclusive; a student may fit into two categories, or may have completed more than one program. It is not possible to total students vertically within this segment of the report.

ACTUAL TOTALS

PLACEMENT OF PROGRAM COMPLETIONS IN SECONDARY VOCATIONAL EDUCATION PROGRAMS BY DISTRICT AND COUNTY

	B	C	D	E	F	G	H	I
	GRADUATED	DROPPED	STATUS UNKNOWN	NOT AVAIL FOR PLACEMENT	EDUCATION AT HIGHER LEVEL	AVAILABLE FOR PLACEMENT	EMPLOYED RELATED FIELD	KNOWN TO BE UNEMPLOYD
DISTRICT 042								
0400 UNSPEC. DISTRIBUTION	35	0	0	24	20	11	11	0
1407 STENO. SECY. & RELAT	13	0	2	6	6	5	0	2
1709 UNSPEC. TRADES & IND	11	4	9	1	0	5	4	0
1713 AUTOMOTIVE SERVICES	8	0	1	0	0	5	3	0
DISTRICT 540								
0101 AGRIC PROD	11	11	15	4	0	3	2	0
0400 UNSPEC. DISTRIBUTION	46	11	16	11	4	30	23	5
0401 CONSUMER & HOMEMAKIN	84	49	121	3	1	9	5	0
1402 UNSPEC. OFFICE	27	1	6	8	7	14	4	9
1703 AUTOMOTIVE SERVICES	2	0	1	0	0	1	0	1
1710 CONSTR & MAINT	6	9	9	0	0	6	4	1
1714 ELEC OCCUP	0	1	1	0	0	0	0	0
1729 METALWORKING OCCUP	6	15	13	4	2	4	0	0
1730 REFRIGERATION	5	1	2	1	0	3	0	0
COUNTY 01								
0101 AGRIC PROD	11	11	15	4	0	3	2	0
0400 UNSPEC. DISTRIBUTION	84	11	16	35	24	41	34	5
0401 CONSUMER & HOMEMAKIN	84	49	121	3	1	9	6	0
1402 UNSPEC. OFFICE	27	1	6	8	7	14	9	9
1403 BILLING, OFFICE MACH	16	0	0	7	7	9	4	1
1407 STENO. SECY. & RELAT	13	0	2	6	6	5	0	2
1709 UNSPEC. TRADES & IND	11	4	9	1	0	5	4	0
1713 AUTOMOTIVE SERVICES	8	0	2	0	0	6	3	1
1715 CONSTR & MAINT	6	9	9	0	0	6	4	1
1716 ELEC OCCUP	0	1	1	0	0	0	0	0
1729 METALWORKING OCCUP	6	15	13	4	2	4	0	0
1730 REFRIGERATION	5	1	2	1	0	3	0	0
TOTAL - ALL VSEC CODES	268	102	196	69	47	109	66	19
DISTRICT 540								
0100 UNSPEC. AGRICULTURE	7	25	25	2	1	5	3	2
0400 UNSPEC. DISTRIBUTION	27	18	9	28	25	12	13	5
0401 CONSUMER & HOMEMAKIN	31	53	60	13	12	11	0	4
1407 STENO. SECY. & RELAT	36	2	5	20	18	13	4	4
1710 CONSTR & MAINT	2	12	13	1	1	0	0	0
1729 METALWORKING OCCUP	7	8	14	0	0	1	0	0
COUNTY 02								
0100 UNSPEC. AGRICULTURE	7	25	25	2	1	5	3	2
0400 UNSPEC. DISTRIBUTION	27	18	9	28	25	12	13	5
0401 CONSUMER & HOMEMAKIN	31	53	60	13	12	11	0	4
1407 STENO. SECY. & RELAT	36	2	5	20	18	13	4	4
1710 CONSTR & MAINT	2	12	13	1	1	0	0	0
1729 METALWORKING OCCUP	7	8	14	0	0	1	0	0
TOTAL - ALL VSEC CODES	110	118	122	64	57	42	20	15

DISTRICT 890								
C1C0 UNSPEC. AGRICULTURE	51	51	50	24	22	28	7	0
C4C0 UNSPEC. DISTRIBUTION	40	26	7	19	17	40	33	0
C5C1 CONSUMER & HOMEMAKIN	27	23	23	15	2	12	12	1
COUNTY 03								
C1C0 UNSPEC. AGRICULTURE	51	51	50	24	22	28	7	0
C4C0 UNSPEC. DISTRIBUTION	40	26	7	19	17	40	33	0
C5C1 CONSUMER & HOMEMAKIN	27	23	23	15	2	12	12	1
TOTAL - ALL USCE CODES	118	100	80	58	41	80	52	1
DISTRICT 910								
3101 AGRIC PROD	32	28	55	5	0	0	0	0
C5C1 CONSUMER & HOMEMAKIN	18	31	18	14	5	17	17	3
1799 OTHER TRADE	20	0	9	0	0	11	11	0
COUNTY 04								
C1C1 AGRIC PROD	32	28	55	5	0	0	0	0
C5C1 CONSUMER & HOMEMAKIN	18	31	18	14	5	17	17	3
1799 OTHER TRADE	20	0	9	0	0	11	11	0
TOTAL - ALL USCE CODES	70	59	82	19	5	28	28	3
DISTRICT 921								
C5C1 CONSUMER & HOMEMAKIN	25	6	31	0	0	0	0	0
DISTRICT 920								
C1C1 AGRIC PROD	27	22	12	9	4	28	19	3
C4C0 UNSPEC. DISTRIBUTION	43	17	15	6	5	39	30	2
C5C1 CONSUMER & HOMEMAKIN	66	56	67	22	18	33	12	16
COUNTY 05								
C1C1 AGRIC PROD	27	22	12	9	4	28	19	3
C4C0 UNSPEC. DISTRIBUTION	43	17	15	6	5	39	30	2
C5C1 CONSUMER & HOMEMAKIN	91	62	98	22	18	33	12	16
TOTAL - ALL USCE CODES	161	101	125	37	27	100	61	21
DISTRICT 931								
C5C1 CONSUMER & HOMEMAKIN	86	11	81	1	0	15	4	8
1400 UNSPEC. OFFICE	27	3	9	10	10	11	12	0
DISTRICT 930								
C1C1 AGRIC PROD	4	23	22	1	0	2	2	0
C4C0 UNSPEC. DISTRIBUTION	26	14	18	2	2	20	13	1
C5C1 CONSUMER & HOMEMAKIN	22	91	95	15	14	3	2	1
1713 DRAFTING OCCUP	7	2	2	4	4	3	1	0
1736 WOODWORKING OCCUP	3	14	6	2	2	9	5	0
COUNTY 06								
C1C1 AGRIC PROD	4	23	22	1	0	2	2	0
C4C0 UNSPEC. DISTRIBUTION	26	14	18	2	2	20	13	1
C5C1 CONSUMER & HOMEMAKIN	108	102	176	16	14	18	6	9
1400 UNSPEC. OFFICE	27	3	9	10	10	11	12	0
1713 DRAFTING OCCUP	7	2	2	4	4	3	1	0
1736 WOODWORKING OCCUP	3	14	6	2	2	9	5	0
TOTAL - ALL USCE CODES	173	158	433	35	32	63	39	10

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DISTRICT 660								
0101 AGRIC PROD	28	33	50	1	0	10	9	0
4660 UNSPEC. DISTRIBUTION	0	5	5	0	0	0	0	0
0459 OTHER DIST	4	4	2	0	0	6	4	0
0501 CONSUMER & HOMEMAKIN	57	43	34	25	10	41	27	12
1200 UNSPEC. TRADES & IND	30	8	7	9	1	22	18	3
1310 CONSTR & MAINT	30	23	24	4	3	25	17	0
1359 OTHER TRDING	20	2	7	4	3	11	11	0
COUNTY 07								
0101 AGRIC PROD	28	33	50	1	0	10	9	0
4660 UNSPEC. DISTRIBUTION	0	5	5	0	0	0	0	0
0459 OTHER DIST	4	4	2	0	0	6	4	0
0501 CONSUMER & HOMEMAKIN	57	43	34	25	10	41	27	12
1200 UNSPEC. TRADES & IND	30	8	7	9	1	22	18	3
1310 CONSTR & MAINT	30	23	24	4	3	25	17	0
1359 OTHER TRDING	20	2	7	4	3	11	11	0
TOTAL - ALL USER CODES	169	118	129	43	17	115	86	15
DISTRICT 662								
0100 UNSPEC. AGRICULTURE	27	14	9	6	6	26	15	3
0501 CONSUMER & HOMEMAKIN	11	9	20	0	0	0	0	0
1407 STENO, SECY, & RELAT	25	3	4	1	0	23	13	3
1310 CONSTR & MAINT	10	4	14	0	0	0	0	0
COUNTY 02								
0100 UNSPEC. AGRICULTURE	27	14	9	6	6	26	15	3
0501 CONSUMER & HOMEMAKIN	11	9	20	0	0	0	0	0
1407 STENO, SECY, & RELAT	25	3	4	1	0	23	13	3
1310 CONSTR & MAINT	10	4	14	0	0	0	0	0
TOTAL - ALL USER CODES	73	30	47	7	6	49	28	6
DISTRICT 771								
0501 CONSUMER & HOMEMAKIN	6	11	11	2	2	4	0	3
DISTRICT 772								
0501 CONSUMER & HOMEMAKIN	11	5	9	1	1	6	0	1
1403 FILING, OFFICE MACH	27	0	9	7	7	11	2	1
DISTRICT 773								
0100 UNSPEC. AGRICULTURE	17	10	10	4	1	5	0	0
0501 CONSUMER & HOMEMAKIN	3	9	6	1	0	5	2	2
DISTRICT 774								
0100 UNSPEC. AGRICULTURE	19	7	10	5	1	11	6	1
4660 UNSPEC. DISTRIBUTION	13	4	4	3	3	10	8	1
0501 CONSUMER & HOMEMAKIN	8	15	23	0	0	0	0	0
DISTRICT 775								
0100 UNSPEC. AGRICULTURE	18	2	1	4	3	15	6	4
0501 CONSUMER & HOMEMAKIN	8	8	0	5	4	11	9	3
DISTRICT 776								
0100 UNSPEC. AGRICULTURE	12	4	6	0	0	10	10	0
0501 CONSUMER & HOMEMAKIN	5	6	8	0	0	3	2	0
COUNTY 05								
0100 UNSPEC. AGRICULTURE	68	23	35	13	5	41	22	5

C4CC UNSPEC. DISTRIBUTION	13	4	4	3	3	10	8	1
6901 CONSUMER & HOMEMAKIN	41	54	57	9	7	29	13	9
1403 FILING, OFFICE MACH	27	0	9	7	7	11	2	1
TOTAL - ALL LSCE CODES	147	81	105	32	22	91	45	16
DISTRICT 911								
C101 AGRIC PROD	16	9	25	0	0	0	0	0
1713 CONSTR & MAINT	3	3	6	0	0	0	0	0
DISTRICT 91C								
C101 AGRIC PROD	56	27	13	12	5	58	27	9
C105 ORNAMENTAL HORT	11	1	3	3	0	6	5	0
1713 CONSTR & MAINT	6	6	5	0	0	7	7	0
1726 MECHANICAL ENGNR	0	1	1	0	0	0	0	0
COUNTY 13								
C101 AGRIC PROD	72	36	38	12	5	58	27	9
C105 ORNAMENTAL HORT	11	1	3	3	0	6	5	0
1713 CONSTR & MAINT	9	9	11	0	0	7	7	0
1726 MECHANICAL ENGNR	0	1	1	0	0	0	0	0
TOTAL - ALL LSCE CODES	92	47	53	15	5	71	39	9
DISTRICT 940								
0101 AGRIC PROD	20	42	33	5	2	24	12	3
6901 CONSUMER & HOMEMAKIN	2	25	25	2	2	0	0	0
1700 UNSPEC. TRADES & IND	0	3	3	0	0	0	0	0
COUNTY 11								
C101 AGRIC PROD	20	42	33	5	2	24	12	3
C901 CONSUMER & HOMEMAKIN	2	25	25	2	2	0	0	0
1700 UNSPEC. TRADES & IND	0	3	3	0	0	0	0	0
TOTAL - ALL LSCE CODES	22	70	61	7	4	24	12	3
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	0	8	8	0	0	0	0	0
6901 CONSUMER & HOMEMAKIN	32	33	52	11	1	2	0	2
COUNTY 12								
0100 UNSPEC. AGRICULTURE	0	8	8	0	0	0	0	0
C101 CONSUMER & HOMEMAKIN	32	33	52	11	1	2	0	2
TOTAL - ALL LSCE CODES	32	41	60	11	1	2	0	2
DISTRICT 920								
0100 UNSPEC. AGRICULTURE	19	4	4	0	0	19	8	2
C101 AGRIC PROD	11	40	39	0	0	12	6	1
C704 OTHER HEALTH	26	17	18	15	13	10	4	1
C901 CONSUMER & HOMEMAKIN	45	14	36	2	1	20	7	2
1403 UNSPEC. OFFICE	5	1	2	0	0	4	3	1
1703 AUTOMOTIVE SERVICES	30	2	3	3	2	26	8	0
1713 CONSTR & MAINT	6	13	16	2	2	1	1	0
1723 METALWORKING OCCUP	6	6	10	1	0	1	0	1
1726 PERSONAL SERV	8	8	12	0	0	4	1	0
COUNTY 13								
C100 UNSPEC. AGRICULTURE	19	4	4	0	0	19	8	2
C101 AGRIC PROD	11	40	39	0	0	12	6	1

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0759 OTHER HEALTH	26	17	18	15	13	10	6	1
6501 CONSUMER & HOMEMAKIN	44	14	36	2	1	20	7	2
1460 UNSPEC. OFFICE	5	1	2	0	0	4	3	1
1303 AUTOMOTIVE SERVICES	39	2	3	3	2	26	8	0
1310 CONSTR & MAINT	6	13	16	2	2	1	1	0
1723 METALWORKING OCCUP	6	6	10	1	0	1	0	1
1326 PERSONAL SERV	8	8	12	0	0	4	1	0
TOTAL - ALL LSCE CODES	155	105	140	23	18	97	38	8
DISTRICT 940								
0101 AGRIC PROD	21	13	5	9	9	20	13	3
6501 CONSUMER & HOMEMAKIN	37	26	15	6	3	42	14	25
1310 CONSTR & MAINT	7	7	2	2	0	10	3	2
COUNTY 14								
0101 AGRIC PROD	21	13	5	9	9	20	13	3
6501 CONSUMER & HOMEMAKIN	37	26	15	6	3	42	14	25
1310 CONSTR & MAINT	7	7	2	2	0	10	3	2
TOTAL - ALL LSCE CODES	65	46	22	17	12	72	30	30
DISTRICT 910								
0101 AGRIC PROD	90	46	35	19	14	32	22	2
0460 UNSPEC. DISTRIBUTION	16	4	2	6	0	12	11	1
6501 CONSUMER & HOMEMAKIN	10	72	49	8	6	25	14	9
COUNTY 15								
0101 AGRIC PROD	90	46	35	19	14	32	22	2
0460 UNSPEC. DISTRIBUTION	16	4	2	6	0	12	11	1
6501 CONSUMER & HOMEMAKIN	10	72	49	8	6	25	14	9
TOTAL - ALL LSCE CODES	96	122	86	33	20	69	47	12
DISTRICT 942								
0101 AGRIC PROD	6	9	14	1	0	0	0	0
0901 CONSUMER & HOMEMAKIN	43	15	58	0	0	0	0	0
1700 UNSPEC. TRADES & IND	17	3	5	3	2	12	7	0
1303 AUTOMOTIVE SERVICES	14	5	1	9	2	9	6	0
DISTRICT 940								
0100 UNSPEC. AGRICULTURE	16	9	11	1	0	13	11	0
6501 CONSUMER & HOMEMAKIN	23	75	85	5	1	8	4	4
1407 STENO, SECY, & RELAT	40	0	3	0	0	37	29	8
1310 CONSTR & MAINT	33	1	2	4	0	24	10	0
COUNTY 16								
0100 UNSPEC. AGRICULTURE	16	9	11	1	0	13	11	0
0101 AGRIC PROD	6	9	14	1	0	0	0	0
6501 CONSUMER & HOMEMAKIN	66	90	143	5	1	8	4	4
1407 STENO, SECY, & RELAT	40	0	3	0	0	37	29	8
1700 UNSPEC. TRADES & IND	17	3	5	3	2	12	7	0
1303 AUTOMOTIVE SERVICES	14	5	1	9	2	9	6	0
1310 CONSTR & MAINT	33	1	2	4	0	28	10	0
TOTAL - ALL LSCE CODES	192	117	179	23	5	107	67	12
DISTRICT 783								
0100 UNSPEC. AGRICULTURE	5	3	8	0	0	0	0	0
6501 CONSUMER & HOMEMAKIN	10	0	1	3	3	6	3	3

DISTRICT 705								
3103 UNSPEC. AGRICULTURE	10	3	12	1	1	0	0	0
6501 CONSUMER & HOMEMAKIN	13	11	24	0	0	0	0	0
DISTRICT 781								
3103 UNSPEC. AGRICULTURE	8	4	8	0	0	4	1	0
6400 UNSPEC. DISTRIBUTION	16	0	0	5	3	11	11	0
6501 CONSUMER & HOMEMAKIN	3	29	32	0	0	0	0	0
1403 FILING, OFFICE MACH	8	0	1	0	0	7	1	2
1710 CONSTR & MAINT	2	0	0	0	0	2	2	0
DISTRICT 882								
6501 CONSUMER & HOMEMAKIN	16	4	22	1	0	2	7	0
DISTRICT 884								
3103 UNSPEC. AGRICULTURE	2	7	7	2	0	0	0	0
6501 CONSUMER & HOMEMAKIN	5	5	10	0	0	0	0	0
DISTRICT 886								
3103 UNSPEC. AGRICULTURE	13	1	14	0	0	6	6	0
COUNTY 17								
3103 UNSPEC. AGRICULTURE	38	24	69	3	1	16	7	0
6400 UNSPEC. DISTRIBUTION	16	0	0	5	3	11	11	0
6501 CONSUMER & HOMEMAKIN	67	56	89	6	3	8	5	3
1403 FILING, OFFICE MACH	8	0	1	0	0	7	1	2
1710 CONSTR & MAINT	2	0	0	0	0	2	2	0
TOTAL - ALL LSCE CODES	111	78	139	12	7	38	26	5
DISTRICT 960								
0101 AGRIC PROD	26	67	91	12	7	60	32	1
6501 CONSUMER & HOMEMAKIN	90	72	59	18	15	38	5	30
1709 UNSPEC. TRADES & IND	1	1	0	0	0	2	2	0
1710 CONSTR & MAINT	0	3	3	0	0	0	0	0
COUNTY 19								
0101 AGRIC PROD	26	67	91	12	7	60	32	1
6501 CONSUMER & HOMEMAKIN	90	72	59	18	15	38	5	30
1709 UNSPEC. TRADES & IND	1	1	0	0	0	2	2	0
1710 CONSTR & MAINT	0	3	3	0	0	0	0	0
TOTAL - ALL LSCE CODES	87	143	100	30	22	80	39	31
DISTRICT 990								
0101 AGRIC PROD	107	75	57	69	25	76	56	2
0103 AGRIC MECHANICS	30	3	6	6	1	25	21	0
6403 UNSPEC. DISTRIBUTION	219	25	66	59	66	138	140	7
3406 FOOD DISTRIBUTION	22	5	5	15	14	7	6	0
6204 OTHER HEALTH	6	2	2	3	3	3	3	0
6501 CONSUMER & HOMEMAKIN	95	1	87	6	6	3	2	0
1603 UNSPEC. OFFICE	35	0	0	6	4	29	29	1
1602 GEN DATA PROCESSING	0	1	1	0	0	0	0	0
1403 FILING, OFFICE MACH	51	25	31	10	10	35	32	2
1607 STENO, SECYS & RELAT	8	8	9	3	3	4	4	0
1709 UNSPEC. TRADES & IND	345	66	63	150	118	269	180	27
1701 AIR CONDITIONING	5	7	7	2	1	3	5	0
1703 AUTOMOTIVE SERVICES	20	35	29	10	4	16	16	0
1707 CML ART LCCUP	13	5	6	0	0	12	12	0
1710 CONSTR & MAINT	28	11	16	3	0	18	16	1

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1114	ELEC ECCUP	17	5	7	0	0	8	7	0
1715	ELECTRONIC ECCUP	12	9	12	4	3	5	5	0
1719	GRAPHICS ARTS ECCUP	6	6	1	7	0	4	4	0
1721	INSTR MAINT & REPAIR	11	7	8	2	0	8	8	1
1723	METALWORKING ECCUP	17	7	7	3	0	14	11	1
1726	PERSONAL SERV	29	28	28	6	4	19	16	1
1731	TEXTILE PROD & FAB	3	6	6	3	3	0	3	0
1799	OTHER TRADE	3	3	5	0	0	1	1	0
DISTRICT 19									
0101	AGRIC PROD	107	75	57	49	25	76	56	2
0103	AGRIC MECHANICS	30	3	5	4	1	25	21	0
0400	WHSPEC. DISTRIBUTION	219	24	46	59	44	138	140	7
0404	FOOD DISTRIBUTION	24	5	5	15	14	7	6	0
0499	OTHER MERCH	6	2	2	3	3	3	3	0
0901	CONSUMER & HOMEMAKIN	95	1	87	6	6	3	2	0
1400	WHSPEC. OFFICE	35	0	0	6	4	29	29	1
1402	BUS DATA PROCESSING	0	1	1	0	0	0	0	0
1403	FILING, OFFICE MACH	51	25	31	10	10	35	32	2
1407	STENO, SECY, & RELAT	8	8	9	3	3	4	4	0
1500	WHSPEC. TRADES & IND	395	66	63	150	118	248	180	27
1701	AIR CONDITIONING	5	7	7	2	1	3	5	0
1703	AUTOMOTIVE SERVICES	20	35	29	10	4	16	14	0
1707	CHL ART ECCUP	13	5	6	0	0	12	12	0
1713	CONSTR & MAINT	24	11	14	3	0	18	16	1
1714	ELEC ECCUP	10	5	7	0	0	8	7	0
1715	ELECTRONIC ECCUP	12	9	12	4	3	5	5	0
1719	GRAPHICS ARTS ECCUP	6	6	1	7	0	4	4	0
1721	INSTR MAINT & REPAIR	11	7	8	2	0	8	8	1
1723	METALWORKING ECCUP	17	7	7	3	0	14	11	1
1726	PERSONAL SERV	29	28	28	6	4	19	16	1
1731	TEXTILE PROD & FAB	3	6	6	3	3	0	3	0
1799	OTHER TRADE	3	3	5	0	0	1	1	0
TOTAL - ALL ESCE CODES		1121	335	435	345	243	676	575	63
DISTRICT 19C									
0103	WHSPEC. AGRICULTURE	15	14	27	2	0	0	0	0
0101	AGRIC PROD	13	0	2	5	5	6	1	1
0400	WHSPEC. DISTRIBUTIN	8	9	9	1	1	7	7	0
0901	CONSUMER & HOMEMAKIN	68	16	53	4	3	7	7	0
1407	STENO, SECY, & RELAT	22	3	5	7	7	13	6	0
1723	METALWORKING ECCUP	10	3	3	2	2	8	6	0
DISTRICT 20									
0103	WHSPEC. AGRICULTURE	15	14	27	2	0	0	0	0
0101	AGRIC PROD	13	0	2	5	5	6	1	1
0400	WHSPEC. DISTRIBUTIN	8	9	9	1	1	7	7	0
0901	CONSUMER & HOMEMAKIN	68	16	53	4	3	7	7	0
1407	STENO, SECY, & RELAT	22	3	5	7	7	13	6	0
1723	METALWORKING ECCUP	10	3	3	2	2	8	6	0
TOTAL - ALL ESCE CODES		116	65	99	21	18	61	27	1
DISTRICT 940									
0101	AGRIC PROD	0	32	32	0	0	0	0	0
0901	CONSUMER & HOMEMAKIN	60	59	52	91	91	6	0	1
1403	FILING, OFFICE MACH	19	1	19	0	0	5	1	0
DISTRICT 21									

3301 AGRIC PROD	0	32	32	0	0	0	0	0
5501 CONSUMER & HOMEMAKIN	60	59	52	61	61	6	0	1
1403 FILING, OFFICE MACH	18	1	14	0	0	5	1	0
TOTAL - ALL USCF CODES	58	92	98	61	61	11	1	1
DISTRICT 540								
3301 AGRIC PROD	20	22	13	6	0	23	19	0
5501 CONSUMER & HOMEMAKIN	26	19	26	2	2	17	12	3
1710 CONSTR & MAINT	5	3	5	1	1	3	3	0
COUNTY 23								
3301 AGRIC PROD	20	22	13	6	0	23	19	0
5501 CONSUMER & HOMEMAKIN	26	19	26	2	2	17	12	3
1710 CONSTR & MAINT	5	3	5	1	1	3	3	0
TOTAL - ALL USCF CODES	51	55	53	9	3	43	36	3
DISTRICT 550								
3301 UNSPEC. AGRICULTURE	11	10	10	6	5	5	7	0
4402 UNSPEC. DISTRIBUTION	16	6	2	9	0	3	10	1
5501 CONSUMER & HOMEMAKIN	117	26	67	62	62	30	14	1
1407 STENO, SECY, & RELAT	44	0	0	24	24	20	15	0
1701 AIR CONDITIONING	11	6	6	2	0	4	4	1
DISTRICT 560								
4302 UNSPEC. AGRICULTURE	4	5	7	1	4	6	6	0
3301 AGRIC PROD	11	20	11	11	8	9	3	0
4402 UNSPEC. DISTRIBUTION	10	3	1	5	2	6	9	0
5501 CONSUMER & HOMEMAKIN	10	22	26	6	2	0	0	0
COUNTY 23								
4302 UNSPEC. AGRICULTURE	20	15	17	7	5	11	13	2
3301 AGRIC PROD	11	20	11	11	8	9	3	0
4402 UNSPEC. DISTRIBUTION	22	5	3	13	10	11	19	1
5501 CONSUMER & HOMEMAKIN	127	68	93	68	64	30	14	1
1407 STENO, SECY, & RELAT	44	0	0	24	24	20	15	0
1701 AIR CONDITIONING	11	6	6	2	0	4	4	1
TOTAL - ALL USCF CODES	239	90	130	109	91	90	70	3
DISTRICT 570								
3302 UNSPEC. AGRICULTURE	33	29	30	7	3	25	5	5
5501 CONSUMER & HOMEMAKIN	51	43	50	10	9	34	20	20
1312 CONSTR & MAINT	16	3	2	3	1	14	10	2
COUNTY 26								
3302 UNSPEC. AGRICULTURE	33	29	30	7	3	25	5	5
5501 CONSUMER & HOMEMAKIN	51	43	50	10	9	34	20	20
1312 CONSTR & MAINT	16	3	2	3	1	14	10	2
TOTAL - ALL USCF CODES	100	75	82	20	13	73	35	26
DISTRICT 580								
5501 CONSUMER & HOMEMAKIN	12	10	22	0	0	0	0	0
COUNTY 25								
5501 CONSUMER & HOMEMAKIN	12	10	22	0	0	0	0	0
TOTAL - ALL USCF CODES	12	10	22	0	0	0	0	0

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DISTRICT 881								
0100 UNSPEC. AGRICULTURE	13	0	1	4	1	8	7	0
0400 UNSPEC. DISTRIBUTION	9	1	0	1	1	9	8	0
0901 CONSUMER & HOMEMAKIN	57	18	73	0	0	2	1	0
1403 FILING, OFFICE MACH	0	0	0	0	0	0	0	0
1700 UNSPEC. TRADES & IND	12	6	14	2	0	2	1	0
DISTRICT 882								
0100 UNSPEC. AGRICULTURE	2	8	9	0	0	1	1	0
0400 UNSPEC. DISTRIBUTION	0	0	0	0	0	0	0	0
0901 CONSUMER & HOMEMAKIN	30	8	29	2	1	7	7	0
1710 CONSTR & MAINT	2	0	0	0	0	2	0	1
DISTRICT 940								
0100 UNSPEC. AGRICULTURE	48	45	47	10	3	36	23	1
0101 AGRIC PROD	30	14	16	2	0	26	14	13
0106 AGRIC RESOURCES	13	8	8	8	6	5	1	0
0901 CONSUMER & HOMEMAKIN	52	56	37	13	5	58	15	29
1710 CONSTR & MAINT	17	4	3	9	4	9	5	2
COUNTY 27								
0100 UNSPEC. AGRICULTURE	63	53	57	14	4	45	31	1
0101 AGRIC PROD	30	14	16	2	0	26	14	13
0106 AGRIC RESOURCES	13	8	8	8	6	5	1	0
0400 UNSPEC. DISTRIBUTION	9	1	0	1	1	9	8	0
0901 CONSUMER & HOMEMAKIN	139	82	139	15	6	67	23	29
1403 FILING, OFFICE MACH	0	0	0	0	0	0	0	0
1700 UNSPEC. TRADES & IND	12	6	14	2	0	2	1	0
1710 CONSTR & MAINT	19	4	3	9	4	11	5	3
TOTAL - ALL USCE CODES	285	168	237	51	21	165	83	46
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	13	11	8	9	4	7	6	0
0901 CONSUMER & HOMEMAKIN	82	38	94	14	8	12	6	3
1713 DRAFTING CCCUP	13	8	15	1	0	5	0	1
COUNTY 28								
0100 UNSPEC. AGRICULTURE	13	11	8	9	4	7	6	0
0901 CONSUMER & HOMEMAKIN	82	38	94	14	8	12	6	3
1713 DRAFTING CCCUP	13	8	15	1	0	5	0	1
TOTAL - ALL USCE CODES	108	57	117	24	12	24	12	4
DISTRICT 920								
0101 AGRIC PROD	41	40	18	2	1	61	50	0
0400 UNSPEC. DISTRIBUTION	20	2	5	1	1	16	8	2
0901 CONSUMER & HOMEMAKIN	10	9	19	0	0	0	0	0
COUNTY 29								
0101 AGRIC PROD	41	40	18	2	1	61	50	0
0400 UNSPEC. DISTRIBUTION	20	2	5	1	1	16	8	2
0901 CONSUMER & HOMEMAKIN	10	9	19	0	0	0	0	0
TOTAL - ALL USCE CODES	71	51	42	3	2	77	58	2
DISTRICT 811								
0901 CONSUMER & HOMEMAKIN	0	0	0	0	0	0	0	0
1400 UNSPEC. OFFICE	41	4	3	25	20	17	16	3
1401 TECHNICIAN	11	2	6	1	0	6	5	0

1710	CONSTR & MAINT	0	2	2	0	0	0	0	0
1723	METALWORKING OCCUP	2	2	4	0	0	0	0	0
1799	OTHER TRDIND	23	10	3	3	1	27	23	1
DISTRICT 610									
0101	AGRIC PROD	35	41	46	5	2	25	25	0
0103	AGRIC MECHANICS	0	3	2	1	0	0	0	0
0400	UNSPEC. DISTRIBUTION	75	22	25	12	4	61	32	5
0601	CONSUMER & HOMEMAKIN	15	23	38	0	0	0	0	0
COUNTY 30									
0101	AGRIC PROD	35	41	46	5	2	25	25	0
0103	AGRIC MECHANICS	0	3	2	1	0	0	0	0
0400	UNSPEC. DISTRIBUTION	76	22	25	12	4	61	32	5
0601	CONSUMER & HOMEMAKIN	15	23	38	0	0	0	0	0
1400	UNSPEC. OFFICE	41	4	3	25	20	17	16	3
1601	TECHNOLOGY	11	2	6	1	0	6	5	0
1710	CONSTR & MAINT	0	2	2	0	0	0	0	0
1723	METALWORKING OCCUP	2	2	4	0	0	0	0	0
1799	OTHER TRDIND	23	10	3	3	1	27	23	1
TOTAL - ALL LSCE CODES		203	109	129	47	27	136	101	9
DISTRICT 640									
0100	UNSPEC. AGRICULTURE	7	14	18	0	0	3	0	0
0601	CONSUMER & HOMEMAKIN	1	21	21	1	1	0	0	0
1407	STENO., SECY., & RELAT	29	1	2	6	6	18	12	4
1703	AUTOMOTIVE SERVICES	1	0	1	0	0	0	0	0
COUNTY 31									
0100	UNSPEC. AGRICULTURE	7	14	18	0	0	3	0	0
0601	CONSUMER & HOMEMAKIN	1	21	21	1	1	0	0	0
1407	STENO, SECY, & RELAT	29	1	2	6	6	18	12	4
1703	AUTOMOTIVE SERVICES	1	0	1	0	0	0	0	0
TOTAL - ALL LSCE CODES		34	36	42	7	7	21	12	4
DISTRICT 821									
0601	CONSUMER & HOMEMAKIN	88	25	105	8	5	0	0	0
1400	UNSPEC. OFFICE	12	6	6	2	0	10	6	1
1726	PERSONAL SERV	0	7	6	1	0	0	0	0
COUNTY 32									
0601	CONSUMER & HOMEMAKIN	88	25	105	8	5	0	0	0
1400	UNSPEC. OFFICE	12	6	6	2	0	10	6	1
1726	PERSONAL SERV	0	7	6	1	0	0	0	0
TOTAL - ALL LSCE CODES		100	38	117	11	5	10	6	1
DISTRICT 821									
0400	UNSPEC. DISTRIBUTION	71	36	49	4	1	54	37	5
0799	OTHER HEALTH	12	8	7	1	1	12	6	0
0801	CONSUMER & HOMEMAKIN	178	74	218	7	5	27	10	12
1400	UNSPEC. OFFICE	41	18	23	2	0	34	31	2
1403	FILING, OFFICE MACH	18	46	49	3	5	10	7	3
1407	STENO, SECY, & RELAT	38	25	25	1	1	37	25	10
1703	AUTOMOTIVE SERVICES	26	42	32	10	8	28	10	3
1707	CML ART OCCUP	9	3	2	2	1	3	5	3
1710	CONSTR & MAINT	80	62	71	16	4	55	25	5
1713	DRAFTING OCCUP	21	23	18	14	2	12	8	0

1715 ELECTRICAL OCCUP	7	8	2	3	0	10	5	0
1719 GRAPHICS ARTS OCCUP	23	21	18	5	2	21	15	0
1723 METALWORKING OCCUP	42	78	98	12	4	40	28	2
1726 PERSONAL SERV	20	55	44	12	10	19	14	2
1729 QTY FOOD OCCUP	18	44	53	6	4	3	3	0
1733 REFRIGERATION	10	17	14	7	0	6	2	2
1733 TEXTILE PROD & FAB	22	58	65	0	0	15	9	3
1736 LEATHER WORKING	2	11	13	0	0	0	0	0
1739 MISCWORKING OCCUP	7	14	12	1	0	8	2	0
9900 TOTAL SPECIAL PROGRA	20	13	13	5	1	15	8	1
DISTRICT 930								
0101 AGRIC PROD	14	0	11	0	0	3	0	0
0400 UNSPEC. DISTRIBUTION	7	1	6	1	1	1	1	0
0901 CONSUMER & HOMEMAKIN	118	37	91	7	5	57	35	11
1400 UNSPEC. OFFICE	37	2	7	10	9	22	19	1
COUNTY 33								
0101 AGRIC PROD	14	0	11	0	0	3	0	0
0400 UNSPEC. DISTRIBUTION	78	37	55	5	4	55	38	5
0700 OTHER HEALTH	12	8	7	1	1	12	6	0
0901 CONSUMER & HOMEMAKIN	296	111	309	14	10	84	45	23
1400 UNSPEC. OFFICE	78	20	30	12	9	56	50	3
1403 FILING, OFFICE MACH	18	46	49	5	5	10	7	3
1407 STENO. SECY. & RELAT	38	25	25	1	1	37	25	10
1703 AUTOMOTIVE SERVICES	26	42	32	10	6	26	16	3
1707 ENG ART OCCUP	9	3	2	2	1	8	5	1
1711 CONSTR & MAINT	80	62	71	16	4	55	25	5
1713 DRAFTING OCCUP	21	23	18	14	2	12	8	0
1715 ELECTRICAL OCCUP	7	8	2	3	0	10	5	0
1719 GRAPHICS ARTS OCCUP	23	21	18	5	2	21	15	0
1723 METALWORKING OCCUP	42	78	98	12	4	40	28	2
1726 PERSONAL SERV	20	55	44	12	10	19	14	2
1729 QTY FOOD OCCUP	18	44	53	6	4	3	3	0
1733 REFRIGERATION	10	17	14	7	0	6	2	2
1733 TEXTILE PROD & FAB	22	58	65	0	0	15	9	3
1736 LEATHER WORKING	2	11	13	0	0	0	0	0
1739 MISCWORKING OCCUP	7	14	12	1	0	8	2	0
9900 TOTAL SPECIAL PROGRA	20	13	13	5	1	15	8	1
TOTAL - ALL USOE CODES	841	696	911	131	62	495	305	65
DISTRICT 910								
0101 AGRIC PROD	5	5	10	0	0	0	0	0
0901 CONSUMER & HOMEMAKIN	25	7	32	0	0	0	0	0
COUNTY 34								
0101 AGRIC PROD	5	5	10	0	0	0	0	0
0901 CONSUMER & HOMEMAKIN	25	7	32	0	0	0	0	0
TOTAL - ALL USOE CODES	30	12	42	0	0	0	0	0
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	44	36	37	11	3	34	8	15
0199 OTHER AGRIC	0	4	0	0	0	4	2	0
0400 UNSPEC. DISTRIBUTION	22	7	7	4	2	13	9	6
0901 CONSUMER & HOMEMAKIN	100	27	95	6	2	26	11	11
1407 STENO. SECY. & RELAT	24	3	8	2	0	17	9	5
1700 UNSPEC. TRADES & IND	21	7	5	2	1	21	6	4
1703 AUTOMOTIVE SERVICES	9	5	5	2	0	7	2	2

COUNTY 35								
0100 UNSPEC. AGRICULTURE	44	36	37	11	3	34	8	15
0199 OTHER AGRIC	0	4	0	0	0	4	2	0
0400 UNSPEC. DISTRIBUTION	22	7	7	4	2	18	9	6
0401 CONSUMER & HOMEMAKIN	100	27	95	6	2	26	11	11
1407 STENO, SECY, & RELAT	29	3	6	2	0	17	9	5
1700 UNSPEC. TRADES & IND	21	7	5	2	1	21	6	4
1703 AUTOMOTIVE SERVICES	3	5	5	2	0	7	2	2
TOTAL - ALL USCE CODES	220	91	157	27	8	127	47	43
DISTRICT 370								
0100 UNSPEC. AGRICULTURE	15	18	16	4	0	15	7	2
0400 UNSPEC. DISTRIBUTION	25	0	0	14	8	11	8	3
0401 CONSUMER & HOMEMAKIN	22	31	22	11	2	20	2	3
1403 FILING, OFFICE MACH	38	3	9	5	5	27	10	8
1700 UNSPEC. TRADES & IND	13	3	4	1	0	11	10	0
1730 REFRIGERATION	0	0	0	0	0	0	0	0
COUNTY 36								
0100 UNSPEC. AGRICULTURE	15	18	16	4	0	13	6	2
0400 UNSPEC. DISTRIBUTION	25	0	0	14	8	11	8	3
0401 CONSUMER & HOMEMAKIN	22	31	22	11	2	20	2	3
1403 FILING, OFFICE MACH	38	3	9	5	5	27	10	8
1700 UNSPEC. TRADES & IND	13	3	4	1	0	11	10	0
1730 REFRIGERATION	0	0	0	0	0	0	0	0
TOTAL - ALL USCE CODES	113	55	51	35	15	82	36	16
DISTRICT 410								
0101 AGRIC PROD	46	57	18	25	19	60	44	7
0103 AGRIC MECHANICS	7	5	3	2	2	7	4	1
0400 UNSPEC. DISTRIBUTION	29	16	16	3	0	26	18	5
COUNTY 37								
0101 AGRIC PROD	46	57	18	25	19	60	44	7
0103 AGRIC MECHANICS	7	5	3	2	2	7	4	1
0400 UNSPEC. DISTRIBUTION	29	16	16	3	0	26	18	5
TOTAL - ALL USCE CODES	82	78	37	30	21	93	66	13
DISTRICT 440								
0100 UNSPEC. AGRICULTURE	38	23	18	13	6	30	25	3
0709 MISC. MEDICAL	40	0	12	2	1	26	6	15
0901 CONSUMER & HOMEMAKIN	93	20	96	12	0	5	10	0
1403 FILING, OFFICE MACH	24	2	11	1	0	14	8	3
1409 TYPING & RELATED OCC	0	3	3	0	0	0	0	0
1701 AIR CONDITIONING	1	1	2	0	0	0	0	0
1710 CONSTR & MAINT	12	5	10	2	0	5	3	0
COUNTY 38								
0100 UNSPEC. AGRICULTURE	38	23	18	13	6	30	25	3
0709 MISC. MEDICAL	40	0	12	2	1	26	6	15
0901 CONSUMER & HOMEMAKIN	93	20	96	12	0	5	10	0
1403 FILING, OFFICE MACH	24	2	11	1	0	14	8	3
1409 TYPING & RELATED OCC	0	3	3	0	0	0	0	0
1701 AIR CONDITIONING	1	1	2	0	0	0	0	0
1710 CONSTR & MAINT	12	5	10	2	0	5	3	0
TOTAL - ALL USCE CODES	208	54	152	30	7	80	52	21

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DISTRICT 570								
0100 UNSPEC. AGRICULTURE	33	28	26	9	2	26	22	1
0400 UNSPEC. DISTRIBUTION	12	13	1	7	4	17	15	2
0901 CONSUMER & HOMEMAKIN	3	42	44	1	1	0	0	0
0902 TOTAL OCCUP PREP	16	8	22	1	0	1	1	0
1403 FILING, OFFICE MACH	47	1	12	14	12	22	12	1
COUNTY 39								
0100 UNSPEC. AGRICULTURE	33	28	26	9	2	26	22	1
0400 UNSPEC. DISTRIBUTION	12	13	1	7	4	17	15	2
0901 CONSUMER & HOMEMAKIN	3	42	44	1	1	0	0	0
0902 TOTAL OCCUP PREP	16	8	22	1	0	1	1	0
1403 FILING, OFFICE MACH	47	1	12	14	12	22	12	1
TOTAL - ALL USCE CODES	111	92	105	32	19	66	50	4
DISTRICT 580								
0100 UNSPEC. AGRICULTURE	15	17	31	1	1	0	0	0
0400 UNSPEC. DISTRIBUTION	32	10	25	8	2	9	9	0
0901 CONSUMER & HOMEMAKIN	0	25	19	0	0	6	0	6
1403 FILING, OFFICE MACH	23	1	6	5	1	13	4	5
1601 TECHNOLOGY	6	2	1	2	2	5	3	0
1703 AUTOMOTIVE SERVICES	14	5	9	1	0	9	8	0
1710 CONSTR & MAINT	9	8	14	1	0	2	2	0
COUNTY 43								
0100 UNSPEC. AGRICULTURE	15	17	31	1	1	0	0	0
0400 UNSPEC. DISTRIBUTION	32	10	25	8	2	9	9	0
0901 CONSUMER & HOMEMAKIN	0	25	19	0	0	6	0	6
1403 FILING, OFFICE MACH	23	1	6	5	1	13	4	5
1601 TECHNOLOGY	6	2	1	2	2	5	3	0
1703 AUTOMOTIVE SERVICES	14	5	9	1	0	9	8	0
1710 CONSTR & MAINT	9	8	14	1	0	2	2	0
TOTAL - ALL USCE CODES	99	68	105	18	6	44	26	11
DISTRICT 570								
0901 CONSUMER & HOMEMAKIN	24	24	21	13	13	14	8	0
COUNTY 41								
0901 CONSUMER & HOMEMAKIN	24	24	21	13	13	14	8	0
TOTAL - ALL USCE CODES	24	24	21	13	13	14	8	0
DISTRICT 580								
0101 AGRIC PROD	21	43	42	11	2	11	8	3
COUNTY 42								
0101 AGRIC PROD	21	43	42	11	2	11	8	3
TOTAL - ALL USCE CODES	21	43	42	11	2	11	8	3
DISTRICT 560								
0101 AGRIC PROD	15	13	17	3	0	9	6	0
0901 CONSUMER & HOMEMAKIN	23	16	37	0	0	2	0	1
1403 FILING, OFFICE MACH	36	2	36	0	0	2	0	0
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1710 CONSTR & MAINT	15	8	17	2	0	4	4	0
COUNTY 43								

0101 AGRIC PROD	16	13	17	3	0	9	6	0
0901 CONSUMER & HOMEMAKIN	23	16	37	0	0	2	0	1
1403 FILING, OFFICE MACH	36	2	36	0	0	2	0	0
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1710 CONSTR & MAINT	15	8	17	2	0	4	4	0
TOTAL - ALL USCE CODES	90	39	107	5	0	17	10	1
DISTRICT 940								
0101 AGRIC PROD	15	14	29	0	0	0	0	0
0901 CONSUMER & HOMEMAKIN	6	18	22	2	2	0	0	0
COUNTY 46								
0101 AGRIC PROD	15	14	29	0	0	0	0	0
0901 CONSUMER & HOMEMAKIN	6	18	22	2	2	0	0	0
TOTAL - ALL USCE CODES	21	32	51	2	2	0	0	0
DISTRICT 910								
0101 AGRIC PROD	21	22	20	6	1	17	16	0
0103 AGRIC MECHANICS	34	29	38	5	3	20	11	3
0901 CONSUMER & HOMEMAKIN	10	19	27	2	1	0	0	0
COUNTY 45								
0101 AGRIC PROD	21	22	20	6	1	17	16	0
0103 AGRIC MECHANICS	34	29	38	5	3	20	11	3
0901 CONSUMER & HOMEMAKIN	10	19	27	2	1	0	0	0
TOTAL - ALL USCE CODES	65	70	85	13	5	37	27	3
DISTRICT 910								
0101 AGRIC PROD	1	15	9	0	0	7	6	1
0105 ORNAMENTAL HORT	26	8	2	4	1	28	20	0
0901 CONSUMER & HOMEMAKIN	31	28	20	2	1	37	36	0
COUNTY 46								
0101 AGRIC PROD	1	15	9	0	0	7	6	1
0105 ORNAMENTAL HORT	26	8	2	4	1	28	20	0
0901 CONSUMER & HOMEMAKIN	31	28	20	2	1	37	36	0
TOTAL - ALL USCE CODES	58	51	31	6	2	72	62	1
DISTRICT 921								
0400 UNSPEC. DISTRIBUTION	143	17	42	53	39	65	58	17
0901 CONSUMER & HOMEMAKIN	162	201	332	15	14	16	12	0
1400 UNSPEC. OFFICE	105	3	23	17	13	68	45	15
1700 UNSPEC. TRADES & IND	0	1	1	0	0	0	0	0
1701 AIR CONDITIONING	10	8	3	4	0	11	13	0
1703 AUTOMOTIVE SERVICES	24	6	15	3	0	12	6	2
1707 CML ART OCCUP	16	8	14	3	1	7	5	2
1709 CML PHOTOG OCCUP	7	12	12	1	0	6	3	0
1710 CONSTR & MAINT	3	9	9	0	0	3	2	0
1713 DRAFTING OCCUP	26	15	13	12	7	16	9	4
1714 ELEC OCCUP	18	5	12	5	0	6	4	0
1715 ELECTRONIC OCCUP	13	18	14	3	0	14	4	2
1719 GRAPHICS ARTS OCCUP	12	1	2	1	0	10	7	0
1723 METALWORKING OCCUP	15	21	19	3	1	14	8	1
1725 PERSONAL SERV	19	24	15	8	1	20	11	7
1729 SERV FOOD OCCUP	15	8	9	7	5	7	5	2
1733 TEXTILE PROD & FAB	7	0	4	0	0	3	3	0

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1736	WLDG&MCHNG OCCUP	6	8	7	0	0	7	2	0
1799	OTHER TRGING	24	8	8	2	0	22	18	3
DISTRICT 920									
0105	ORNAMENTAL HORT	21	15	7	18	11	11	1	1
0400	UNSPEC. DISTRIBUTION	45	12	25	9	6	23	16	3
0401	ADVERTISING SERV	4	0	2	0	0	2	2	0
0799	OTHER HEALTH	24	4	8	16	17	4	7	1
0901	CONSUMER & HOMEMAKIN	293	204	309	95	88	93	49	22
0902	TOTAL OCCUP PREP	14	7	11	0	0	10	3	4
1400	UNSPEC. OFFICE	98	0	10	35	35	53	44	6
1702	APPLIANCE REPAIR	11	2	3	5	2	5	0	1
1703	AUTOMOTIVE SERVICES	52	38	32	18	2	40	14	5
1710	CONSTR & MAINT	21	2	6	8	5	9	4	1
1713	DRAFTING OCCUP	31	4	13	15	13	7	1	1
1715	ELECTRONIC OCCUP	12	0	12	0	0	0	0	0
1719	GENERAL CONTINUATION	0	17	17	0	0	0	0	0
1723	METALWORKING OCCUP	21	2	1	5	1	17	5	2
1726	PERSONAL SERV	0	19	16	3	3	0	0	0
1729	OTY FOOD OCCUP	2	0	0	1	0	1	0	0
COUNTY 47									
0105	ORNAMENTAL HORT	21	15	7	18	11	11	1	1
0400	UNSPEC. DISTRIBUTION	188	29	67	62	45	88	74	20
0401	ADVERTISING SERV	4	0	2	0	0	2	2	0
0799	OTHER HEALTH	24	4	8	16	17	4	7	1
0901	CONSUMER & HOMEMAKIN	455	405	641	110	102	109	61	22
0902	TOTAL OCCUP PREP	14	7	11	0	0	10	3	4
1400	UNSPEC. OFFICE	203	3	33	52	48	121	89	21
1700	UNSPEC. TRADES & IND	0	1	1	0	0	0	0	0
1701	AIR CONDITIONING	10	8	3	4	0	11	13	0
1702	APPLIANCE REPAIR	11	2	3	5	2	5	0	1
1703	AUTOMOTIVE SERVICES	76	44	47	21	2	52	20	7
1707	CML ART OCCUP	16	8	14	3	1	7	5	2
1709	CML PHOTO OCCUP	7	12	12	1	0	6	3	0
1710	CONSTR & MAINT	24	11	15	8	5	12	6	1
1713	DRAFTING OCCUP	57	19	26	27	20	23	10	5
1714	ELEC OCCUP	18	5	12	5	0	6	4	0
1715	ELECTRONIC OCCUP	25	18	26	3	0	14	4	2
1719	GENERAL CONTINUATION	0	17	17	0	0	0	0	0
1719	GRAPHICS ARTS OCCUP	12	1	2	1	0	10	7	0
1723	METALWORKING OCCUP	56	23	20	8	2	31	13	3
1726	PERSONAL SERV	19	43	31	11	4	20	11	7
1729	OTY FOOD OCCUP	17	8	9	8	5	8	5	2
1733	TEXTILE PROD & FAB	7	0	4	0	0	3	3	0
1736	WLDG&MCHNG OCCUP	6	8	7	0	0	7	2	0
1799	OTHER TRGING	24	8	8	2	0	22	18	3
TOTAL - ALL LSCE CODES		1274	699	1026	365	264	582	361	102
DISTRICT 980									
0100	UNSPEC. AGRICULTURE	6	11	13	2	1	2	2	0
0901	CONSUMER & HOMEMAKIN	25	19	42	2	2	0	0	0
1407	STENO, SECY, & RELAT	9	4	2	1	1	10	5	3
1710	CONSTR & MAINT	20	2	2	13	8	7	4	1
COUNTY 48									
0100	UNSPEC. AGRICULTURE	6	11	13	2	1	2	2	0
0901	CONSUMER & HOMEMAKIN	25	19	42	2	2	0	0	0
1407	STENO, SECY, & RELAT	9	4	2	1	1	10	5	3

1710 CONSTR & MAINT	20	2	2	13	8	7	4	1
TOTAL - ALL USCE CODES	60	36	59	18	12	19	11	4
DISTRICT 580								
0100 UNSPEC. AGRICULTURE	55	29	56	4	2	24	24	0
0103 AGRIC MECHANICS	9	32	40	1	1	0	0	0
0400 UNSPEC. DISTRIBUTION	24	6	9	6	4	15	7	5
0901 CONSUMER & HOMEMAKIN	40	31	68	3	3	0	0	0
1710 CONSTR & MAINT	15	1	1	1	1	14	7	5
1726 PERSONAL SERV	2	2	3	0	0	1	1	0
9902 TOTAL SPECIAL PROGRA	4	7	4	1	0	6	6	0
COUNTY 49								
0100 UNSPEC. AGRICULTURE	55	29	56	4	2	24	24	0
0103 AGRIC MECHANICS	9	32	40	1	1	0	0	0
0400 UNSPEC. DISTRIBUTION	24	6	9	6	4	15	7	5
0901 CONSUMER & HOMEMAKIN	40	31	68	3	3	0	0	0
1710 CONSTR & MAINT	15	1	1	1	1	14	7	5
1726 PERSONAL SERV	2	2	3	0	0	1	1	0
9902 TOTAL SPECIAL PROGRA	4	7	4	1	0	6	6	0
TOTAL - ALL USCE CODES	149	108	181	16	11	60	45	10
DISTRICT 570								
0100 UNSPEC. AGRICULTURE	20	28	25	14	12	9	4	0
0101 AGRIC PROD	18	8	11	0	0	15	11	2
0400 UNSPEC. DISTRIBUTION	13	7	11	6	2	3	2	0
0901 CONSUMER & HOMEMAKIN	66	53	67	14	13	38	14	19
1403 FILING, OFFICE MACH	1	2	3	0	0	0	0	0
1700 UNSPEC. TRADES & IND	10	3	1	4	1	8	0	3
1710 CONSTR & MAINT	5	7	2	0	0	10	2	0
COUNTY 50								
0100 UNSPEC. AGRICULTURE	20	28	25	14	12	9	4	0
0101 AGRIC PROD	18	8	11	0	0	15	11	2
0400 UNSPEC. DISTRIBUTION	13	7	11	6	2	3	2	0
0901 CONSUMER & HOMEMAKIN	66	53	67	14	13	38	14	19
1403 FILING, OFFICE MACH	1	2	3	0	0	0	0	0
1700 UNSPEC. TRADES & IND	10	3	1	4	1	8	0	3
1710 CONSTR & MAINT	5	7	2	0	0	10	2	0
TOTAL - ALL USCE CODES	133	108	120	38	28	83	33	24
DISTRICT 570								
0100 UNSPEC. AGRICULTURE	7	15	18	1	0	3	0	0
0501 CONSUMER & HOMEMAKIN	8	6	14	0	0	0	0	0
1403 FILING, OFFICE MACH	13	7	1	0	0	19	2	12
COUNTY 51								
0100 UNSPEC. AGRICULTURE	7	15	18	1	0	3	0	0
0501 CONSUMER & HOMEMAKIN	8	6	14	0	0	0	0	0
1403 FILING, OFFICE MACH	13	7	1	0	0	19	2	12
TOTAL - ALL USCE CODES	28	28	33	1	0	22	2	12
DISTRICT 560								
0100 UNSPEC. AGRICULTURE	25	41	42	13	9	11	10	0
0501 CONSUMER & HOMEMAKIN	63	24	74	5	1	8	7	1
0902 TOTAL COOOP PROP	24	1	1	8	7	16	2	8

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1403 FILING, OFFICE MACH	20	3	2	7	4	14	13	2
1723 METALWORKING OCCUP	0	1	1	0	0	0	0	0
COUNTY 52								
0100 UNSPEC. AGRICULTURE	25	41	42	13	9	11	10	0
0501 CONSUMER & HOMEMAKIN	63	24	74	5	1	8	7	1
0902 TOTAL OCCUP PREP	24	1	1	8	7	16	2	8
1403 FILING, OFFICE MACH	20	3	2	7	4	14	13	2
1723 METALWORKING OCCUP	0	1	1	0	0	0	0	0
TOTAL - ALL USOE CODES	132	70	120	33	21	49	32	11
DISTRICT 921								
0199 OTHER AGRIC	15	41	0	32	26	24	16	6
0901 CONSUMER & HOMEMAKIN	23	63	20	60	54	6	3	3
DISTRICT 920								
0101 AGRIC PROD	9	20	20	3	1	6	6	0
0901 CONSUMER & HOMEMAKIN	16	6	21	0	0	1	0	1
COUNTY 53								
0101 AGRIC PROD	9	20	20	3	1	6	6	0
0199 OTHER AGRIC	15	41	0	32	26	24	16	6
0901 CONSUMER & HOMEMAKIN	39	69	41	60	54	7	3	4
TOTAL - ALL USOE CODES	63	130	61	95	81	37	25	10
DISTRICT 930								
0101 AGRIC PROD	18	11	14	3	0	12	7	1
0102 AGRIC SUPPLIES/SERVI	19	3	8	5	4	9	7	0
0400 UNSPEC. DISTRIBUTION	45	13	7	14	9	37	20	6
0901 CONSUMER & HOMEMAKIN	53	50	76	14	12	13	10	2
1403 UNSPEC. OFFICE	60	7	8	16	16	43	21	10
1703 UNSPEC. TRADES & IND	26	7	6	9	6	18	14	1
1704 AUTOMOTIVE SERVICES	26	16	18	5	4	19	7	2
1710 CONSTR & MAINT	2	2	1	1	0	2	1	0
1713 DRAFTING OCCUP	24	0	2	3	0	19	15	1
1726 PERSONAL SERV	20	19	19	3	2	17	9	3
1736 ACCOUNTING OCCUP	2	11	7	2	2	4	4	0
9900 TOTAL SPECIAL PROGRA	4	0	0	0	0	4	2	0
COUNTY 54								
0101 AGRIC PROD	18	11	14	3	0	12	7	1
0102 AGRIC SUPPLIES/SERVI	19	3	8	5	4	9	7	0
0400 UNSPEC. DISTRIBUTION	45	13	7	14	9	37	20	6
0501 CONSUMER & HOMEMAKIN	53	50	76	14	12	13	10	2
1400 UNSPEC. OFFICE	60	7	8	16	16	43	21	10
1703 UNSPEC. TRADES & IND	26	7	6	9	6	18	14	1
1704 AUTOMOTIVE SERVICES	26	16	18	5	4	19	7	2
1710 CONSTR & MAINT	2	2	1	1	0	2	1	0
1713 DRAFTING OCCUP	24	0	2	3	0	19	15	1
1726 PERSONAL SERV	20	19	19	3	2	17	9	3
1736 ACCOUNTING OCCUP	2	11	7	2	2	4	4	0
9900 TOTAL SPECIAL PROGRA	4	0	0	0	0	4	2	0
TOTAL - ALL USOE CODES	299	139	166	75	55	197	117	26
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	57	20	29	16	10	32	19	1
0400 UNSPEC. DISTRIBUTION	9	4	6	1	0	6	1	3

C501 CONSUMER & HOMEMAKIN	61	24	72	3	3	10	6	3
C502 TOTAL OCCUP PREP	1	2	3	0	0	0	0	0
1403 FILING, OFFICE MACH	18	1	11	0	0	8	3	2
1700 UNSPEC. TRADES & IND	11	7	4	7	6	7	8	0
1723 METALWORKING OCCUP	0	23	23	0	0	0	0	0
COUNTY 55								
C100 UNSPEC. AGRICULTURE	57	20	29	16	10	32	19	1
C400 UNSPEC. DISTRIBUTION	9	4	6	1	0	6	1	3
C501 CONSUMER & HOMEMAKIN	61	24	72	3	3	10	6	3
C502 TOTAL OCCUP PREP	1	2	3	0	0	0	0	0
1403 FILING, OFFICE MACH	18	1	11	0	0	8	3	2
1700 UNSPEC. TRADES & IND	11	7	4	7	6	7	8	0
1723 METALWORKING OCCUP	0	23	23	0	0	0	0	0
TOTAL - ALL USCE CODES	157	81	148	27	19	63	37	9
DISTRICT 560								
0101 AGRIC PROD	22	35	43	2	2	12	7	0
0901 CONSUMER & HOMEMAKIN	30	35	54	2	0	9	3	5
1403 FILING, OFFICE MACH	16	0	0	1	1	15	7	5
1710 CONSTR & MAINT	5	11	2	3	1	11	5	3
COUNTY 56								
0101 AGRIC PROD	22	35	43	2	2	12	7	0
0901 CONSUMER & HOMEMAKIN	30	35	54	2	0	9	3	5
1403 FILING, OFFICE MACH	16	0	0	1	1	15	7	5
1710 CONSTR & MAINT	5	11	2	3	1	11	5	3
TOTAL - ALL USCE CODES	73	81	99	8	4	47	22	13
DISTRICT 871								
C400 UNSPEC. DISTRIBUTION	12	0	2	4	4	6	6	0
0901 CONSUMER & HOMEMAKIN	35	37	68	1	1	3	0	3
1401 ACCOUNTING & COMPUTI	14	6	7	12	12	1	0	0
1713 CONSTR & MAINT	12	4	2	7	4	7	8	1
DISTRICT 870								
C100 UNSPEC. AGRICULTURE	58	40	31	14	5	53	38	3
0901 CONSUMER & HOMEMAKIN	78	76	137	3	2	14	1	11
1403 FILING, OFFICE MACH	34	3	2	11	11	24	18	5
1710 CONSTR & MAINT	24	15	8	20	16	11	11	5
COUNTY 57								
C100 UNSPEC. AGRICULTURE	58	40	31	14	5	53	38	3
C400 UNSPEC. DISTRIBUTION	12	0	2	4	4	6	6	0
C501 CONSUMER & HOMEMAKIN	113	113	205	4	3	17	1	14
1401 ACCOUNTING & COMPUTI	14	6	7	12	12	1	0	0
1403 FILING, OFFICE MACH	34	3	2	11	11	24	18	5
1710 CONSTR & MAINT	36	19	10	27	20	18	19	6
TOTAL - ALL USCE CODES	267	181	257	72	55	119	82	28
DISTRICT 930								
0901 CONSUMER & HOMEMAKIN	0	12	12	0	0	0	0	0
COUNTY 59								
0901 CONSUMER & HOMEMAKIN	0	12	12	0	0	0	0	0
TOTAL - ALL USCE CODES	0	12	12	0	0	0	0	0

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DISTRICT 960								
0100 UNSPEC. AGRICULTURE	34	10	36	1	0	7	5	0
0901 CONSUMER & HOMEMAKIN	40	14	38	8	8	8	0	3
1407 STENO. SECY. & RELAT	25	5	6	6	6	18	16	1
1723 METALWORKING OCCUP	29	0	0	14	10	15	15	0
COUNTY 59								
0100 UNSPEC. AGRICULTURE	34	10	36	1	0	7	5	0
0901 CONSUMER & HOMEMAKIN	40	14	38	8	8	8	0	3
1407 STENO. SECY. & RELAT	25	5	6	6	6	18	16	1
1723 METALWORKING OCCUP	29	0	0	14	10	15	15	0
TOTAL - ALL USCE CODES	128	29	80	29	24	48	36	4
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	45	20	17	9	3	39	29	5
0400 UNSPEC. DISTRIBUTION	31	3	14	9	7	11	11	1
0901 CONSUMER & HOMEMAKIN	88	64	101	35	19	16	7	3
1403 FILING, OFFICE MACH	39	0	10	10	10	19	14	2
1710 CONSTR & MAINT	23	11	13	5	0	16	9	5
COUNTY 60								
0100 UNSPEC. AGRICULTURE	45	20	17	9	3	39	29	5
0400 UNSPEC. DISTRIBUTION	31	3	14	9	7	11	11	1
0901 CONSUMER & HOMEMAKIN	88	64	101	35	19	16	7	3
1403 FILING, OFFICE MACH	39	0	10	10	10	19	14	2
1710 CONSTR & MAINT	23	11	13	5	0	16	9	5
TOTAL - ALL USCE CODES	226	98	155	68	39	101	70	16
DISTRICT 980								
0101 AGRIC PROD	64	60	62	8	1	54	15	17
0901 CONSUMER & HOMEMAKIN	43	55	89	1	0	8	6	1
1799 OTHER TRAINO	15	6	6	2	0	13	5	0
COUNTY 62								
0101 AGRIC PROD	64	60	62	8	1	54	15	17
0901 CONSUMER & HOMEMAKIN	43	55	89	1	0	8	6	1
1799 OTHER TRAINO	15	6	6	2	0	13	5	0
TOTAL - ALL USCE CODES	122	121	157	11	1	75	26	18
DISTRICT 960								
0101 AGRIC PROD	41	50	35	33	34	23	25	2
0901 CONSUMER & HOMEMAKIN	126	51	153	10	6	14	2	6
1401 ACCOUNTING & COMPUTI	40	0	2	17	17	21	16	2
1403 FILING, OFFICE MACH	24	5	9	12	10	8	5	3
1407 STENO. SECY. & RELAT	63	2	5	10	7	50	36	12
1703 UNSPEC. TRADES & IND	35	8	2	12	3	29	22	5
1710 CONSTR & MAINT	10	23	3	18	13	12	10	0
1723 METALWORKING OCCUP	5	0	0	0	0	5	5	0
1726 PERSONAL SERV	12	3	5	0	0	10	9	1
COUNTY 63								
0101 AGRIC PROD	41	50	35	33	34	23	25	2
0901 CONSUMER & HOMEMAKIN	126	51	153	10	6	14	2	6
1401 ACCOUNTING & COMPUTI	40	0	2	17	17	21	16	2
1403 FILING, OFFICE MACH	24	5	9	12	10	8	5	3
1407 STENO. SECY. & RELAT	63	2	5	10	7	50	36	12
1703 UNSPEC. TRADES & IND	35	8	2	12	3	29	22	5

1710 CONSTR & MAINT	10	23	3	18	13	12	10	0
1728 METALWORKING OCCUP	5	0	0	0	0	5	5	0
1726 PERSONAL SERV	12	3	5	0	0	10	9	1
TOTAL - ALL USCE CODES	356	142	214	112	90	172	130	31
DISTRICT 980								
0100 UNSPEC. AGRICULTURE	0	9	9	0	0	0	0	0
0501 CONSUMER & HOMEMAKIN	11	9	5	0	0	15	6	7
COUNTY 64								
0100 UNSPEC. AGRICULTURE	0	9	9	0	0	0	0	0
0501 CONSUMER & HOMEMAKIN	11	9	5	0	0	15	6	7
TOTAL - ALL USCE CODES	11	18	14	0	0	15	6	7
DISTRICT 940								
0101 AGRIC PROD	23	31	8	8	3	38	23	9
0501 CONSUMER & HOMEMAKIN	28	32	28	1	0	31	10	12
1400 UNSPEC. OFFICE	1	0	0	1	1	0	0	0
1401 TECHNOLOGY	2	2	2	0	0	2	2	0
1723 METALWORKING OCCUP	7	5	6	1	0	5	4	0
COUNTY 65								
0101 AGRIC PROD	23	31	8	8	3	38	23	9
0501 CONSUMER & HOMEMAKIN	28	32	28	1	0	31	10	12
1400 UNSPEC. OFFICE	1	0	0	1	1	0	0	0
1401 TECHNOLOGY	2	2	2	0	0	2	2	0
1723 METALWORKING OCCUP	7	5	6	1	0	5	4	0
TOTAL - ALL USCE CODES	61	70	44	11	4	76	39	21
DISTRICT 981								
0400 UNSPEC. DISTRIBUTION	19	5	24	0	0	0	0	0
0501 CONSUMER & HOMEMAKIN	5	20	15	7	1	3	1	2
1407 STENO., SECY., & RELAT	15	4	9	0	0	10	9	1
DISTRICT 980								
0100 UNSPEC. AGRICULTURE	30	20	6	10	9	34	16	6
0400 UNSPEC. DISTRIBUTION	15	5	10	4	4	6	6	0
0501 CONSUMER & HOMEMAKIN	41	39	58	5	5	17	7	8
1403 FILING, OFFICE MACH	13	1	4	0	0	10	3	2
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1703 AUTOMOTIVE SERVICES	22	10	9	3	0	20	10	1
1710 CONSTR & MAINT	8	5	2	1	0	10	2	1
COUNTY 66								
0100 UNSPEC. AGRICULTURE	30	20	6	10	9	34	16	6
0400 UNSPEC. DISTRIBUTION	34	10	34	4	4	6	6	0
0501 CONSUMER & HOMEMAKIN	46	59	73	12	6	20	8	10
1403 FILING, OFFICE MACH	13	1	4	0	0	10	3	2
1407 STENO., SECY., & RELAT	15	4	9	0	0	10	9	1
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1703 AUTOMOTIVE SERVICES	22	10	9	3	0	20	10	1
1710 CONSTR & MAINT	8	5	2	1	0	10	2	1
TOTAL - ALL USCE CODES	168	109	137	30	19	110	54	21
DISTRICT 940								
0101 AGRIC PROD	21	62	81	2	1	0	0	0

0901 CONSUMER & HOMEMAKIN	11	6	2	4	4	11	9	2
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1710 CONSTR & MAINT	5	8	8	2	0	3	2	0
COUNTY 67								
0101 AGRIC PROD	21	62	81	2	1	0	0	0
0901 CONSUMER & HOMEMAKIN	11	6	2	4	4	11	9	2
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1710 CONSTR & MAINT	5	8	8	2	0	3	2	0
TOTAL - ALL USCE CODES	37	76	91	8	5	14	11	2
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	26	4	20	3	1	7	6	0
0901 CONSUMER & HOMEMAKIN	0	10	3	0	0	7	3	4
COUNTY 68								
0100 UNSPEC. AGRICULTURE	26	4	20	3	1	7	6	0
0901 CONSUMER & HOMEMAKIN	0	10	3	0	0	7	3	4
TOTAL - ALL USCE CODES	26	14	23	3	1	14	9	4
DISTRICT 940								
0101 AGRIC PROD	14	2	1	5	6	10	8	1
0901 CONSUMER & HOMEMAKIN	11	12	8	7	5	8	7	1
1710 CONSTR & MAINT	10	8	9	3	0	6	4	0
COUNTY 69								
0101 AGRIC PROD	14	2	1	5	6	10	8	1
0901 CONSUMER & HOMEMAKIN	11	12	8	7	5	8	7	1
1710 CONSTR & MAINT	10	8	9	3	0	6	4	0
TOTAL - ALL USCE CODES	35	22	18	15	11	24	19	2
DISTRICT 930								
0101 AGRIC PROD	3	3	2	1	0	3	3	0
0107 FORESTRY	13	0	2	2	2	9	4	2
0400 UNSPEC. DISTRIBUTION	6	2	4	1	1	3	2	0
0901 CONSUMER & HOMEMAKIN	34	30	24	33	19	7	6	1
1400 UNSPEC. OFFICE	45	7	8	10	9	34	15	12
1703 AUTOMOTIVE SERVICES	16	4	1	1	1	18	12	2
1710 CONSTR & MAINT	0	0	0	0	0	0	0	0
9900 TOTAL SPECIAL PROGRA	2	2	2	1	0	1	0	0
COUNTY 70								
0101 AGRIC PROD	3	3	2	1	0	3	3	0
0107 FORESTRY	13	0	2	2	2	9	4	2
0400 UNSPEC. DISTRIBUTION	6	2	4	1	1	3	2	0
0901 CONSUMER & HOMEMAKIN	34	30	24	33	19	7	6	1
1400 UNSPEC. OFFICE	45	7	8	10	9	34	15	12
1703 AUTOMOTIVE SERVICES	16	4	1	1	1	18	12	2
1710 CONSTR & MAINT	0	0	0	0	0	0	0	0
9900 TOTAL SPECIAL PROGRA	2	2	2	1	0	1	0	0
TOTAL - ALL USCE CODES	119	48	43	49	32	75	42	17
DISTRICT 940								
0101 AGRIC PROD	23	13	16	14	6	6	1	1
0103 AGRIC MECHANICS	0	1	1	0	0	0	0	0
0400 UNSPEC. DISTRIBUTION	12	10	4	9	6	9	10	1

0799 OTHER HEALTH	16	1	3	9	9	5	4	1
0901 CONSUMER & HOMEMAKIN	118	40	74	50	41	34	21	6
1403 FILING, OFFICE MACH	27	5	4	15	12	13	5	1
1407 STENO, SECY, & RELAT	59	1	4	23	21	33	24	5
1700 UNSPEC. TRADES & IND	1	0	0	0	0	1	0	0
1710 CONSTR & MAINT	20	10	10	7	0	13	4	0
1713 DRAFTING OCCUP	15	0	2	11	11	2	0	0
1730 WOODWORKING OCCUP	30	8	5	15	7	18	8	1
COUNTY 71								
0101 AGRIC PROD	23	13	16	14	6	6	1	1
0103 AGRIC MECHANICS	0	1	1	0	0	0	0	0
0400 UNSPEC. DISTRIBUTION	12	10	4	9	6	9	10	1
0799 OTHER HEALTH	16	1	3	9	9	5	4	1
0901 CONSUMER & HOMEMAKIN	118	40	74	50	41	34	21	6
1403 FILING, OFFICE MACH	27	5	4	15	12	13	5	1
1407 STENO, SECY, & RELAT	59	1	4	23	21	33	24	5
1700 UNSPEC. TRADES & IND	1	0	0	0	0	1	0	0
1710 CONSTR & MAINT	20	10	10	7	0	13	4	0
1713 DRAFTING OCCUP	15	0	2	11	11	2	0	0
1730 WOODWORKING OCCUP	30	8	5	15	7	18	8	1
TOTAL - ALL USOE CODES	321	89	123	153	113	134	77	16
DISTRICT 930								
0101 AGRIC PROD	22	14	15	3	3	18	15	0
0400 UNSPEC. DISTRIBUTION	26	2	6	5	2	17	13	3
0901 CONSUMER & HOMEMAKIN	23	48	70	0	0	1	0	0
1710 CONSTR & MAINT	11	5	5	2	1	9	9	0
COUNTY 72								
0101 AGRIC PROD	22	14	15	3	3	18	15	0
0400 UNSPEC. DISTRIBUTION	26	2	6	5	2	17	13	3
0901 CONSUMER & HOMEMAKIN	23	48	70	0	0	1	0	0
1710 CONSTR & MAINT	11	5	5	2	1	9	9	0
TOTAL - ALL USOE CODES	82	69	96	10	6	45	37	3
DISTRICT 841								
0901 CONSUMER & HOMEMAKIN	7	16	13	6	1	4	2	2
1700 UNSPEC. TRADES & IND	22	3	7	3	1	15	9	2
1723 METALWORKING OCCUP	11	0	0	4	1	7	7	0
1799 OTHER TRAIND	22	11	1	7	2	25	12	4
DISTRICT 842								
0400 UNSPEC. DISTRIBUTION	14	2	4	4	4	8	3	0
0901 CONSUMER & HOMEMAKIN	26	10	35	1	1	0	0	0
1710 CONSTR & MAINT	8	8	7	0	0	9	7	0
DISTRICT 940								
0101 AGRIC PROD	5	3	0	2	2	6	5	0
0199 OTHER AGRIC	1	11	10	0	0	2	2	0
0400 UNSPEC. DISTRIBUTION	9	9	10	3	2	5	3	1
0901 CONSUMER & HOMEMAKIN	24	26	50	0	0	0	0	0
1710 CONSTR & MAINT	8	0	0	4	2	4	2	0
1723 METALWORKING OCCUP	0	2	2	0	0	0	0	0
COUNTY 73								
0101 AGRIC PROD	5	3	0	2	2	6	5	0
0199 OTHER AGRIC	1	11	10	0	0	2	2	0

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0400	UNSPEC. DISTRIBUTION	23	11	14	7	6	13	6	1
C901	CONSUMER & HOMEMAKIN	57	52	98	7	2	4	2	2
1700	UNSPEC. TRADES & IND	22	3	7	3	1	15	9	2
1710	CONSTR & MAINT	16	8	7	4	2	13	9	0
1723	METALWORKING OCCUP	11	2	2	4	1	7	7	0
1759	OTHER TRGING	22	11	1	7	2	25	12	4
TOTAL - ALL USCE CODES		157	101	139	34	16	85	52	9
DISTRICT 960									
C101	AGRIC PROD	49	39	35	13	7	40	30	3
C901	CONSUMER & HOMEMAKIN	54	88	45	47	43	50	27	4
1403	FILING, OFFICE MACH	40	0	3	11	11	26	19	5
1700	UNSPEC. TRADES & IND	9	0	0	4	0	5	3	1
1723	METALWORKING OCCUP	28	4	1	11	7	20	13	1
COUNTY 74									
C101	AGRIC PROD	49	39	35	13	7	40	30	3
C901	CONSUMER & HOMEMAKIN	54	88	45	47	43	50	27	4
1403	FILING, OFFICE MACH	40	0	3	11	11	26	19	5
1700	UNSPEC. TRADES & IND	9	0	0	4	0	5	3	1
1723	METALWORKING OCCUP	28	4	1	11	7	20	13	1
TOTAL - ALL USCE CODES		180	131	84	86	68	141	92	14
DISTRICT 960									
0100	UNSPEC. AGRICULTURE	54	28	31	13	6	38	20	2
0101	AGRIC PROD	12	2	2	1	0	11	7	0
C901	CONSUMER & HOMEMAKIN	95	95	160	12	9	18	7	8
0902	TOTAL OCCUP PREP	24	1	6	5	3	14	6	4
1403	FILING, OFFICE MACH	33	3	9	4	2	23	21	0
1700	UNSPEC. TRADES & IND	20	6	1	7	4	18	11	5
1703	AUTOMOTIVE SERVICES	33	5	4	8	4	26	8	2
1723	METALWORKING OCCUP	13	3	0	0	0	16	3	1
COUNTY 75									
0100	UNSPEC. AGRICULTURE	54	28	31	13	6	38	20	2
0101	AGRIC PROD	12	2	2	1	0	11	7	0
C901	CONSUMER & HOMEMAKIN	95	95	160	12	9	18	7	8
C902	TOTAL OCCUP PREP	24	1	6	5	3	14	6	4
1403	FILING, OFFICE MACH	33	3	9	4	2	23	21	0
1700	UNSPEC. TRADES & IND	20	6	1	7	4	18	11	5
1703	AUTOMOTIVE SERVICES	33	5	4	8	4	26	8	2
1723	METALWORKING OCCUP	13	3	0	0	0	16	3	1
TOTAL - ALL USCE CODES		284	143	213	50	28	164	83	22
DISTRICT 741									
C101	AGRIC PROD	14	11	25	0	0	0	0	0
C901	CONSUMER & HOMEMAKIN	23	10	32	0	0	1	1	0
DISTRICT 940									
C101	AGRIC PROD	14	25	36	1	0	2	0	2
1703	AUTOMOTIVE SERVICES	7	6	3	0	1	10	1	1
1710	CONSTR & MAINT	1	7	0	0	0	8	6	2
1726	PERSONAL SERV	1	7	8	0	0	0	0	0
1759	OTHER TRGING	5	9	12	0	0	2	1	0
COUNTY 76									
C101	AGRIC PROD	28	36	61	1	0	2	0	2

C901	CONSUMER & HOMEMAKIN	23	10	32	0	0	1	1	0
1703	AUTOMOTIVE SERVICES	7	6	3	0	1	10	1	1
1710	CONSTR & MAINT	1	7	0	0	0	8	6	2
1726	PERSONAL SERV	1	7	8	0	0	0	0	0
1799	OTHER TRGIND	5	9	12	0	0	2	1	0
TOTAL - ALL USCE CODES		65	75	116	1	1	23	9	5
DISTRICT 930									
0100	UNSPEC. AGRICULTURE	11	12	11	3	2	9	2	0
1400	UNSPEC. OFFICE	0	1	1	0	1	0	0	0
COUNTY 77									
0100	UNSPEC. AGRICULTURE	11	12	11	3	2	9	2	0
1400	UNSPEC. OFFICE	0	1	1	0	1	0	0	0
TOTAL - ALL USCE CODES		11	13	12	3	3	9	2	0
DISTRICT 910									
0101	AGRIC PROD	50	51	56	7	1	38	27	3
C901	CONSUMER & HOMEMAKIN	91	52	66	8	3	69	38	8
1726	PERSONAL SERV	0	11	11	0	0	0	0	0
1799	OTHER TRGIND	21	0	0	3	0	18	12	0
COUNTY 78									
0101	AGRIC PROD	50	51	56	7	1	38	27	3
C901	CONSUMER & HOMEMAKIN	91	52	66	8	3	69	38	8
1726	PERSONAL SERV	0	11	11	0	0	0	0	0
1799	OTHER TRGIND	21	0	0	3	0	18	12	0
TOTAL - ALL USCE CODES		162	114	133	18	4	125	77	11
DISTRICT 891									
0101	AGRIC PROD	91	9	23	19	16	58	19	13
0105	ORNAMENTAL HORT	9	2	0	10	8	1	1	0
C900	UNSPEC. DISTRIBUTIN	465	101	154	84	30	328	257	48
0703	NURSING	38	5	23	2	2	18	3	15
0709	MISC. MEDICAL	20	16	16	3	3	17	13	2
C901	CONSUMER & HOMEMAKIN	609	317	414	247	201	265	127	63
0902	TOTAL OCCUP PREP	139	22	35	42	30	84	21	35
1400	UNSPEC. OFFICE	5	14	10	2	0	7	6	0
1402	BUS DATA PROCESSING	57	0	9	30	21	18	1	4
1403	FILING, OFFICE MACH	419	66	127	131	119	227	141	84
1407	STENO, SECY, & RELAT	40	1	4	7	7	30	26	1
1409	TYPING & RELATED OCC	1	1	2	0	0	0	0	0
1702	APPLIANCE REPAIR	10	7	7	5	4	5	2	0
1703	AUTOMOTIVE SERVICES	52	35	36	12	9	39	23	4
1710	CONSTR & MAINT	9	6	4	2	1	9	6	3
1713	DRAFTING OCCUP	5	3	3	5	0	0	0	0
1715	ELECTRONIC OCCUP	39	32	23	18	12	30	13	5
1719	GRAPHICS ARTS OCCUP	20	8	5	5	1	18	2	5
1723	METALWORKING OCCUP	21	24	3	7	2	35	16	11
1726	PERSONAL SERV	31	45	40	13	5	23	18	7
1733	TEXTILE PROD & FAB	14	14	19	4	3	5	2	2
1734	LEATHER WORKING	12	3	3	6	2	6	6	0
1735	UPHOLSTERING	4	16	16	1	0	3	2	0
1736	WOODWORKING OCCUP	4	4	2	5	0	1	0	0
1799	OTHER TRGIND	113	29	24	31	19	87	73	6
9900	TOTAL SPECIAL PROGRA	0	25	12	9	8	4	2	1

COUNTY 79								
C101 AGRIC PROD	91	9	23	19	16	58	19	13
C105 ORNAMENTAL HORT	9	2	0	10	8	1	1	0
C409 UNSPEC. DISTRIBUTION	465	101	154	84	30	328	257	48
C703 NURSING	38	5	23	2	2	16	3	15
C709 MISC. MEDICAL	20	16	16	3	3	17	13	2
C901 CONSUMER & HOMEMAKIN	609	317	414	247	221	265	127	63
C902 TOTAL OCCUP PREP	139	22	35	42	30	84	21	35
1400 UNSPEC. OFFICE	5	14	10	2	0	7	6	0
1402 BUS DATA PROCESSING	57	0	9	30	21	18	1	4
1403 FILING, OFFICE MACH	419	66	127	131	119	227	141	84
1407 STENO, SECY, & RELAT	40	1	4	7	7	30	26	1
1409 TYPING & RELATED OCC	1	1	2	0	0	0	0	0
1702 APPLIANCE REPAIR	10	7	7	5	4	5	2	0
1703 AUTOMOTIVE SERVICES	52	35	36	12	9	39	23	4
1710 CONSTR & MAINT	9	6	4	2	1	9	6	3
1713 DRAFTING OCCUP	5	3	3	5	0	0	0	0
1715 ELECTRONIC OCCUP	39	32	23	18	12	30	13	5
1719 GRAPHICS ARTS OCCUP	20	8	5	5	1	18	2	5
1723 METALWORKING OCCUP	21	24	3	7	2	35	16	11
1726 PERSONAL SERV	31	45	40	13	5	23	18	7
1733 TEXTILE PROD & FAB	14	14	19	4	3	5	2	2
1734 LEATHER WORKING	12	3	3	6	2	6	6	0
1735 UPHOLSTERING	4	16	16	1	0	3	2	0
1736 WOODWORKING OCCUP	4	4	2	5	0	1	0	0
1799 OTHER TREIND	113	29	24	31	19	87	73	6
5900 TOTAL SPECIAL PROGRA	0	25	12	9	8	4	2	1
TOTAL - ALL USCE CODES	2227	805	1014	700	503	1318	780	309
DISTRICT 940								
C101 AGRIC PROD	12	7	7	0	0	12	9	0
C901 CONSUMER & HOMEMAKIN	25	20	28	0	0	17	6	3
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1703 AUTOMOTIVE SERVICES	6	2	2	0	0	6	4	0
1710 CONSTR & MAINT	13	4	13	0	1	4	3	0
COUNTY 40								
C101 AGRIC PROD	12	7	7	0	0	12	9	0
C901 CONSUMER & HOMEMAKIN	25	20	28	0	0	17	6	3
1700 UNSPEC. TRADES & IND	0	0	0	0	0	0	0	0
1703 AUTOMOTIVE SERVICES	6	2	2	0	0	6	4	0
1710 CONSTR & MAINT	13	4	13	0	1	4	3	0
TOTAL - ALL USCE CODES	56	33	50	0	1	39	22	3
DISTRICT 980								
C101 AGRIC PROD	16	7	12	0	0	11	9	1
1407 STENO, SECY, & RELAT	24	0	1	2	2	21	9	6
COUNTY 81								
C101 AGRIC PROD	16	7	12	0	0	11	9	1
1407 STENO, SECY, & RELAT	24	0	1	2	2	21	9	6
TOTAL - ALL USCE CODES	40	7	13	2	2	32	18	7
DISTRICT 811								
1703 AUTOMOTIVE SERVICES	13	19	5	11	4	16	12	0
1710 CONSTR & MAINT	5	25	4	4	1	22	8	2
1714 ELEC OCCUP	6	17	3	8	3	12	2	2

1715	ELECTRONIC OCCUP	0	10	4	3	0	3	0	0
1723	METALWORKING OCCUP	4	9	0	7	4	6	6	1
1726	PERSONAL SERV	7	9	2	9	5	5	4	1
1799	OTHER TRGIND	10	2	0	2	1	10	8	0
DISTRICT 812									
0400	UNSPEC. DISTRIBUTION	71	15	55	4	0	27	26	1
0901	CONSUMER & HOMEMAKIN	59	49	103	5	0	0	0	0
1700	UNSPEC. TRADES & IND	1	1	2	0	0	0	0	0
DISTRICT 910									
0101	AGRIC PROD	0	4	4	0	0	0	0	0
0103	AGRIC MECHANICS	33	13	46	0	0	0	0	0
0901	CONSUMER & HOMEMAKIN	56	106	141	18	17	3	0	3
COUNTY 82									
0101	AGRIC PROD	0	4	4	0	0	0	0	0
0103	AGRIC MECHANICS	33	13	46	0	0	0	0	0
0400	UNSPEC. DISTRIBUTION	71	15	55	4	0	27	26	1
0901	CONSUMER & HOMEMAKIN	115	155	244	23	17	3	0	3
1700	UNSPEC. TRADES & IND	1	1	2	0	0	0	0	0
1703	AUTOMOTIVE SERVICES	13	19	5	11	4	16	12	0
1710	CONSTR & MAINT	5	25	4	4	1	22	8	2
1714	ELEC OCCUP	6	17	3	8	3	12	2	2
1715	ELECTRONIC OCCUP	0	10	4	3	0	3	0	0
1723	METALWORKING OCCUP	4	9	0	7	4	6	6	1
1726	PERSONAL SERV	7	9	2	9	5	5	4	1
1799	OTHER TRGIND	10	2	0	2	1	10	8	0
TOTAL - ALL LSCE CODES		265	279	369	71	35	104	66	10
DISTRICT 960									
0101	AGRIC PROD	115	96	46	52	44	113	92	12
0103	AGRIC MECHANICS	14	100	86	19	13	9	7	1
0400	UNSPEC. DISTRIBUTION	3	5	6	2	1	0	0	0
0901	CONSUMER & HOMEMAKIN	216	110	184	88	83	54	38	14
1407	STENO., SECY., & RELAT	114	23	36	22	18	79	63	13
1700	UNSPEC. TRADES & IND	50	6	4	48	47	4	23	1
COUNTY 83									
0101	AGRIC PROD	115	96	46	52	44	113	92	12
0103	AGRIC MECHANICS	14	100	86	19	13	9	7	1
0400	UNSPEC. DISTRIBUTION	3	5	6	2	1	0	0	0
0901	CONSUMER & HOMEMAKIN	216	110	184	88	83	54	38	14
1407	STENO., SECY., & RELAT	114	23	36	22	18	79	63	13
1700	UNSPEC. TRADES & IND	50	6	4	48	47	4	23	1
TOTAL - ALL LSCE CODES		512	340	362	231	206	259	223	41
DISTRICT 990									
0100	UNSPEC. AGRICULTURE	39	64	46	32	29	25	20	1
0101	AGRIC PROD	17	18	3	16	9	16	11	0
0901	CONSUMER & HOMEMAKIN	116	108	182	27	16	15	2	10
1710	CONSTR & MAINT	27	11	33	1	0	4	1	0
COUNTY 84									
0100	UNSPEC. AGRICULTURE	39	64	46	32	29	25	20	1
0101	AGRIC PROD	17	18	3	16	9	16	11	0
0901	CONSUMER & HOMEMAKIN	116	108	182	27	16	15	2	10
1710	CONSTR & MAINT	27	11	33	1	0	4	1	0

TOTAL - ALL USCE CODES	199	201	264	76	54	60	34	11
DISTRICT 950								
0101 AGRIC PROD	8	14	5	1	0	16	15	0
0901 CONSUMER & HOMEMAKIN	0	14	11	3	3	0	0	0
COUNTY 85								
0101 AGRIC PROD	8	14	5	1	0	16	15	0
0901 CONSUMER & HOMEMAKIN	0	14	11	3	3	0	0	0
TOTAL - ALL USCE CODES	8	28	16	4	3	16	15	0
DISTRICT 910								
0101 AGRIC PROD	18	7	4	4	2	17	11	1
0400 UNSPEC. DISTRIBUTION	0	2	1	1	1	0	0	0
0901 CONSUMER & HOMEMAKIN	4	99	100	2	0	1	1	0
1400 UNSPEC. OFFICE	30	0	6	11	8	13	5	5
COUNTY 86								
0101 AGRIC PROD	18	7	4	4	2	17	11	1
0400 UNSPEC. DISTRIBUTION	0	2	1	1	1	0	0	0
0901 CONSUMER & HOMEMAKIN	4	99	100	2	0	1	1	0
1400 UNSPEC. OFFICE	30	0	6	11	8	13	5	5
TOTAL - ALL USCE CODES	52	108	111	18	11	31	17	6
DISTRICT 940								
0100 UNSPEC. AGRICULTURE	15	27	23	4	0	15	8	2
0901 CONSUMER & HOMEMAKIN	9	21	21	1	0	8	0	0
COUNTY 88								
0100 UNSPEC. AGRICULTURE	15	27	23	4	0	15	8	2
0901 CONSUMER & HOMEMAKIN	9	21	21	1	0	8	0	0
TOTAL - ALL USCE CODES	24	48	44	5	0	23	8	2
DISTRICT 940								
0100 UNSPEC. AGRICULTURE	25	3	3	8	0	17	12	0
0499 OTHER DIST	40	7	6	11	11	30	32	3
0901 CONSUMER & HOMEMAKIN	106	24	60	45	39	25	2	7
1407 STENO, SECY, & RELAT	38	0	6	19	18	13	13	0
1702 APPLIANCE REPAIR	3	5	7	0	0	1	0	1
1710 CONSTR & MAINT	25	14	9	5	3	25	13	5
1714 ELEC OCCUP	15	2	17	0	0	0	0	0
COUNTY 89								
0100 UNSPEC. AGRICULTURE	25	3	3	8	0	17	12	0
0499 OTHER DIST	40	7	6	11	11	30	32	3
0901 CONSUMER & HOMEMAKIN	106	24	60	45	39	25	2	7
1407 STENO, SECY, & RELAT	38	0	6	19	18	13	13	0
1702 APPLIANCE REPAIR	3	5	7	0	0	1	0	1
1710 CONSTR & MAINT	25	14	9	5	3	25	13	5
1714 ELEC OCCUP	15	2	17	0	0	0	0	0
TOTAL - ALL USCE CODES	252	55	108	88	71	111	72	16
DISTRICT 811								
0400 UNSPEC. DISTRIBUTION	28	4	2	2	0	28	18	0
0901 CONSUMER & HOMEMAKIN	25	4	19	0	0	10	6	1
0902 TOTAL OCCUP PREP	8	7	5	2	0	8	7	0

1400 UNSPEC. OFFICE	10	0	0	0	0	10	7	0
1703 AUTOMOTIVE SERVICES	8	1	1	1	1	7	8	0
1710 CONSTR & MAINT	5	0	0	0	0	5	5	0
1715 ELECTRONIC OCCUP	5	5	4	0	0	6	4	0
1723 METALWORKING OCCUP	24	6	2	2	0	26	20	0
1799 OTHER TRGIND	13	4	4	0	0	13	10	0
DISTRICT 910								
0101 AGRIC PROD	57	47	60	9	5	35	16	4
0400 UNSPEC. DISTRIBUTION	8	1	4	0	0	5	3	0
0901 CONSUMER & HOMEMAKIN	8	14	16	2	2	4	0	2
1799 OTHER TRGIND	21	3	2	6	2	16	12	1
COUNTY 90								
0101 AGRIC PROD	57	47	60	9	5	35	16	4
0400 UNSPEC. DISTRIBUTION	36	5	6	2	0	33	21	0
0901 CONSUMER & HOMEMAKIN	33	18	35	2	2	14	6	3
0902 TOTAL OCCUP PREP	8	7	5	2	0	8	7	0
1400 UNSPEC. OFFICE	10	0	0	0	0	10	7	0
1703 AUTOMOTIVE SERVICES	8	1	1	1	1	7	8	0
1710 CONSTR & MAINT	5	0	0	0	0	5	5	0
1715 ELECTRONIC OCCUP	5	5	4	0	0	6	4	0
1723 METALWORKING OCCUP	24	6	2	2	0	26	20	0
1799 OTHER TRGIND	34	7	6	6	2	29	22	1
TOTAL - ALL USCE CODES	220	96	119	24	10	173	116	8
DISTRICT 970								
0100 UNSPEC. AGRICULTURE	39	9	11	13	11	24	15	0
0901 CONSUMER & HOMEMAKIN	7	1	8	0	0	0	0	0
COUNTY 91								
0100 UNSPEC. AGRICULTURE	39	9	11	13	11	24	15	0
0901 CONSUMER & HOMEMAKIN	7	1	8	0	0	0	0	0
TOTAL - ALL USCE CODES	46	10	19	13	11	24	15	0
DISTRICT 980								
0100 UNSPEC. AGRICULTURE	56	39	52	17	12	26	13	2
0901 CONSUMER & HOMEMAKIN	111	63	130	20	10	24	5	0
COUNTY 92								
0100 UNSPEC. AGRICULTURE	56	39	52	17	12	26	13	2
0901 CONSUMER & HOMEMAKIN	111	63	130	20	10	24	5	0
TOTAL - ALL USCE CODES	167	102	182	37	22	50	18	2
DISTRICT 940								
0101 AGRIC PROD	0	4	4	0	0	0	0	0
0400 UNSPEC. DISTRIBUTION	0	3	0	2	0	1	0	0
0901 CONSUMER & HOMEMAKIN	106	27	45	33	22	55	6	11
1407 STENO, SECY, & RELAT	25	7	7	1	0	24	10	9
1710 CONSTR & MAINT	17	6	5	5	4	13	6	1
1723 METALWORKING OCCUP	15	3	3	4	0	11	4	1
COUNTY 93								
0101 AGRIC PROD	0	4	4	0	0	0	0	0
0400 UNSPEC. DISTRIBUTION	0	3	0	2	0	1	0	0
0901 CONSUMER & HOMEMAKIN	106	27	45	33	22	55	6	11
1407 STENO, SECY, & RELAT	25	7	7	1	0	24	10	9

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1710 CONSTR & MAINT	17	6	5	5	4	13	6	1
1720 METALWORKING OCCUP	15	3	3	4	0	11	4	1
TOTAL - ALL USCE CODES	163	50	64	45	26	104	26	22
DISTRICT 040								
1703 AUTOMOTIVE SERVICES	0	1	1	0	0	0	0	0
1710 CONSTR & MAINT	0	2	0	1	1	1	0	0
1720 PERSONAL SERV	0	4	2	0	0	2	0	2
DISTRICT 960								
0100 UNSPEC. AGRICULTURE	54	42	51	4	4	41	17	2
0901 CONSUMER & HOMEMAKIN	94	61	80	13	11	62	19	22
1403 FILING, OFFICE MACH	30	5	8	10	4	17	21	3
1407 STENO, SECY, & RELAT	19	0	0	19	19	0	14	0
1700 UNSPEC. TRADES & IND	0	2	0	0	0	2	2	0
1703 AUTOMOTIVE SERVICES	17	8	8	17	24	0	1	0
1715 ELECTRONIC OCCUP	25	4	1	10	10	18	4	2
COUNTY 64								
0100 UNSPEC. AGRICULTURE	54	42	51	4	4	41	17	2
0901 CONSUMER & HOMEMAKIN	94	61	80	13	11	62	19	22
1403 FILING, OFFICE MACH	30	5	8	10	4	17	21	3
1407 STENO, SECY, & RELAT	19	0	0	19	19	0	14	0
1700 UNSPEC. TRADES & IND	0	2	0	0	0	2	2	0
1703 AUTOMOTIVE SERVICES	17	9	9	17	24	0	1	0
1710 CONSTR & MAINT	0	2	0	1	1	1	0	0
1715 ELECTRONIC OCCUP	25	4	1	10	10	18	4	2
1720 PERSONAL SERV	0	4	2	0	0	2	0	2
TOTAL - ALL USCE CODES	239	129	151	74	73	143	78	31
DISTRICT 040								
0101 AGRIC PROD	41	37	34	8	5	36	25	1
0901 CONSUMER & HOMEMAKIN	59	71	123	6	1	1	1	0
1700 UNSPEC. TRADES & IND	15	2	2	0	0	15	12	0
1703 AUTOMOTIVE SERVICES	10	4	4	0	0	10	3	0
1710 CONSTR & MAINT	12	1	4	0	0	9	2	0
COUNTY 95								
0101 AGRIC PROD	41	37	34	8	5	36	25	1
0901 CONSUMER & HOMEMAKIN	59	71	123	6	1	1	1	0
1700 UNSPEC. TRADES & IND	15	2	2	0	0	15	12	0
1703 AUTOMOTIVE SERVICES	10	4	4	0	0	10	3	0
1710 CONSTR & MAINT	12	1	4	0	0	9	2	0
TOTAL - ALL USCE CODES	137	115	167	14	6	71	43	1

DISCUSSION OF FOLLOW-UP DATA

The Placement of Program Completions in Vocational Education Programs chart is based upon data reported by vocational teachers. The 89,240 students were reported in the follow-up of vocational education students for the 1970-71 school year. The status report concerns the placement of these students during the 1971-72 school year. The chart lists the vocational programs by four-digit USOE codes and gives totals for each major area--agriculture, distribution, health, homemaking office, technology, and trades and industry. The possible categories for student placement after program completion are: graduated, dropped, status unknown, not available for placement, education at a higher level, available for placement, employed in related field and known to be unemployed.

Based upon this information, a projection was made for the actual 95,472 students enrolled in vocational training programs during the school year 1970-71. This projection is charted on page 46 in the Placement of Program Completions in Vocational Education Programs projected totals. This chart does not represent an actual accumulation of data but is a ratio of the previously mentioned teacher reports for 89,240 students that is projected to 95,472 students.

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ACTUAL TOTALS

PLACEMENT OF PROGRAM COMPLETIONS IN SECONDARY VOCATIONAL EDUCATION PROGRAMS BY STATEWIDE TOTALS

		B	C	D	E	F	G	H	I
		GRADUATED	DROPPED	STATUS UNKNOWN	NOT AVAIL FOR PLACEMENT	EDUCATION AT HIGHER LEVEL	AVAILABLE FOR PLACEMENT	EMPLOYED RELATED FIELD	KNOWN TO BE UNEMPLOYD
0100	UNSPEC. AGRICULTURE	1176	889	1006	307	179	752	449	62
0101	AGRIC PROD	1489	1473	1374	418	292	1170	789	122
0102	AGRIC SUPPLIES/SERVI	19	5	8	5	4	9	7	0
0103	AGRIC MECHANICS	127	180	220	32	20	61	43	5
0105	ORNAMENTAL HORT	67	26	12	35	20	46	27	1
0106	AGRIC RESOURCES	13	8	8	8	6	5	1	0
0107	FORESTRY	13	0	2	2	2	9	4	2
0199	OTHER AGRIC	16	56	10	32	26	30	20	6
0100	TOTAL AGRICULTURE	2920	2641	2640	839	509	2082	1340	198
0400	UNSPEC. DISTRIBUTION	1612	473	664	455	280	1156	926	140
0401	ADVERTISING SERV	4	0	2	0	0	2	2	0
0406	FOOD DISTRIBUTION	22	5	5	15	14	7	6	0
0499	OTHER DIST	44	11	8	11	11	36	36	3
0400	TOTAL DISTRIBUTION	1682	489	679	481	305	1211	970	143
0703	NURSING	38	5	23	2	2	18	3	15
0709	MISC. MEDICAL	66	16	28	5	4	43	19	17
0799	OTHER HEALTH	84	32	38	44	43	34	24	3
0700	TOTAL HEALTH	182	53	89	51	49	95	46	35
0901	CONSUMER & HOMEMAKIN	5575	4247	6715	1347	1021	1760	816	514
0902	TOTAL OCCUP PREP	231	52	85	62	40	136	42	54
0900	CONSUMER AND HOMEMAK	5806	4299	6800	1409	1061	1896	858	568
1400	UNSPEC. OFFICE	579	67	122	155	133	369	268	66
1401	ACCOUNTING & COMPUTI	56	7	11	29	29	23	16	3
1402	BUS DATA PROCESSING	57	1	10	30	21	18	1	4
1403	FILING, OFFICE MACH	1033	182	371	266	231	578	353	152
1407	STENO, SECY, & RELAT	706	92	143	180	164	475	342	87
1409	TYPING & RELATED OCC	1	4	5	0	0	0	0	0
1400	TOTAL OFFICE	2432	353	662	660	578	1463	980	312
1601	TECHNOLOGY	19	6	9	3	2	13	10	0
1600	TECHNOLOGY	19	6	9	3	2	13	10	0
1700	UNSPEC. TRADES & IND	763	147	140	262	190	445	332	52
1701	AIR CONDITIONING	27	22	18	8	1	23	24	1
1702	APPLIANCE REPAIR	24	14	17	10	6	11	2	2
1703	AUTOMOTIVE SERVICES	408	249	221	114	64	322	160	25
1707	CML ART OCCUP	38	16	22	5	2	27	22	5
1709	CML PHOTOG OCCUP	7	12	12	1	0	6	3	0
1710	CONSTR & MAINT	611	401	400	165	78	447	255	49
1713	DRAFTING OCCUP	142	55	68	65	37	64	34	7
1714	ELEC OCCUP	49	30	40	13	3	26	13	2
1715	ELECTRONIC OCCUP	113	86	72	41	25	86	35	9

1718	GENERAL CONTINUATION	0	17	17	0	0	0	0	0
1719	GRAPHICS ARTS OCCUP	61	36	26	18	3	53	28	5
1721	INSTR MAINT & REPAIR	11	7	8	2	0	8	8	1
1723	METALWORKING OCCUP	286	235	193	81	34	247	152	22
1726	PERSONAL SERV	152	238	212	55	30	123	86	24
1729	UTY FOOD OCCUP	35	52	62	14	9	11	8	2
1730	REFRIGERATION	15	18	16	8	0	9	2	2
1733	TEXTILE PROD & FAB	46	78	94	7	6	23	17	5
1734	LEATHER WORKING	14	14	16	6	2	6	6	0
1735	UPHOLSTERING	4	16	16	1	0	3	2	0
1736	WOODWORKING OCCUP	52	60	40	25	11	47	21	1
1799	OTHER TRADE	310	87	81	60	28	256	197	15
1700	TOTAL TRADES & INDUS	3105	1890	1791	961	529	2243	1407	229
9900	TOTAL SPECIAL PROGRA	30	47	31	16	9	30	18	2
9900	TOTAL SPECIAL PROGRA	30	47	31	16	9	30	18	2
TOTAL	= ALL USER CODES	16376	9778	12701	4420	3042	9033	5629	1487

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PROJECTED TOTALS

PLACEMENT OF PROGRAM COMPLETIONS IN SECONDARY VOCATIONAL EDUCATION PROGRAMS BY STATEWIDE TOTALS

		B	C	D	E	F	G	H	I
0101	AGRIC PROD	2334	2309	2154	655	395	1834	1237	191
0102	AGRIC SUPPLIES/SERVI	114	18	48	30	24	54	42	0
0103	AGRIC MECHANICS	425	622	736	107	66	204	143	16
0105	ORNAMENTAL HORT	100	38	17	52	29	68	40	1
0106	AGRIC RESOURCES	134	82	82	82	61	51	10	0
0107	FORESTRY	242	0	37	37	37	168	74	37
0199	OTHER AGRIC	8	30	5	17	13	16	10	3
0104	AGRICULTURAL PRODUCT	22	20	20	6	3	16	10	1
0100	TOTAL AGRICULTURE	3379	3119	3099	986	628	2411	1566	249
0401	ADVERTISING SERV	7	0	3	0	0	3	3	0
0406	FOOD DISTRIBUTION	288	65	65	196	183	91	78	0
0499	OTHER DIST	423	105	76	105	105	346	346	28
0402	APPAREL & ACCES	250	66	92	65	41	164	132	19
0403	AUTOMOTIVE	144	37	52	36	23	93	74	10
0404	FINANCE & CREDIT	39	9	12	9	5	23	18	2
0405	FLORISTRY	15	3	5	3	2	9	7	1
0407	FOOD SERVICES	188	49	68	48	30	121	97	14
0408	GEN MERCHANDISE	440	114	158	112	71	283	226	33
0409	HOM ECON MATERIALS	56	14	20	14	9	36	29	4
0410	HOME FURNISHINGS	34	8	12	8	5	21	17	2
0411	HOTEL & LODGING	28	7	10	7	4	18	14	2
0412	INDUSTRIAL MARKETING	12	3	4	3	2	7	6	0
0413	INSURANCE	11	3	4	3	1	7	6	0
0414	INTERNATIONAL TRADE	2	0	0	0	0	1	1	0
0415	PERSONAL SERVICES	74	19	27	19	12	48	38	5
0416	PETROLEUM	51	13	18	13	8	33	26	3
0417	REAL ESTATE	6	1	2	1	1	4	3	0
0418	RECREATION & TOURISM	39	10	14	10	6	25	20	3
0419	TRANSPORTATION	75	19	27	19	12	48	39	5
0400	TOTAL DISTRIBUTION	2184	545	669	671	520	1381	1180	131
0703	NURSING	30	4	18	1	1	14	2	12
0799	OTHER HEALTH	126	48	57	66	64	51	36	4
0700	TOTAL HEALTH	156	52	75	67	65	65	38	16
0501	CONSUMER & HOMEMAKIN	6411	4884	7722	1549	1174	2024	938	591
0902	TOTAL OCCUP PREP	354	79	130	95	61	208	64	82
0900	TOTAL HOMEMAKIN	6765	4963	7852	1644	1235	2232	1002	673
1401	ACCOUNTING & COMPUTI	18	2	3	9	9	7	5	1
1402	BUS DATA PROCESSING	63	1	11	33	23	20	1	4
1403	FILING, OFFICE MACH	1291	227	403	332	288	722	441	190
1407	STENO, SECY, & RELAT	1194	155	242	304	277	803	578	147
1409	TYPING & RELATED OCC	1	7	8	0	0	0	0	0
1404	INFO COMMUNIC OCCUP	10	1	2	2	2	6	4	1
1405	MTLS SUPP, TRANS, ET	0	0	1	1	1	3	2	0
1406	PERS, TRG, & RELATED	0	0	0	0	0	0	0	0
1499	OTHER OFFICE	11	1	3	3	2	6	4	1
1400	TOTAL OFFICE	2594	394	733	684	602	1567	1035	344

1661	TECHNOLOGY	3	1	1	0	0	2	1	0
1660	TECHNOLOGY	3	1	1	0	0	2	1	0
1701	AIR CONDITIONING	123	100	82	36	4	105	109	4
1702	APPLIANCE REPAIR	23	13	16	9	5	10	1	1
1703	AUTOMOTIVE SERVICES	503	344	305	157	88	444	221	34
1707	CML ART OCCUP	47	20	27	6	2	34	27	6
1709	CML PHOTOG OCCUP	7	12	12	1	0	6	3	0
1711	CONSTR & MAINT	570	374	373	153	72	417	237	45
1713	DRAFTING OCCUP	160	62	77	73	41	72	38	7
1714	ELEC OCCUP	61	37	49	16	3	32	16	2
1715	ELECTRONIC OCCUP	160	121	102	58	35	121	49	12
1719	GRAPHICS ARTS OCCUP	116	68	49	34	5	101	53	9
1721	INSTR MAINT & REPAIR	2	1	1	0	0	1	1	0
1723	METALWORKING OCCUP	405	382	314	131	55	402	247	35
1725	PERSONAL SERV	233	160	121	83	45	186	130	36
1729	QTY FOOD OCCUP	44	66	78	17	11	13	10	2
1730	REFRIGERATION	17	21	19	9	0	10	2	2
1733	TEXTILE PROD & FAB	44	75	90	6	5	22	16	4
1734	LEATHER WORKING	18	18	20	7	2	7	7	0
1735	UPHOLSTERING	7	30	30	1	0	5	3	0
1739	WOODWORKING OCCUP	81	93	62	39	17	73	32	1
1799	OTHER TRDNG	598	167	156	115	54	494	380	28
1765	BLUEPRINT READING	0	0	0	0	0	0	0	0
1766	CML FISHERY OCCUP	0	0	0	0	0	0	0	0
1711	CUSTODIAL SERV	23	14	13	7	4	16	10	1
1716	FABRIC MAINT SERV	6	4	3	2	1	4	3	0
1717	FOREMANSHIP SUPER &	3	2	2	1	0	2	1	0
1724	METAL OCCUPATIONS	0	0	0	0	0	0	0	0
1727	PLASTICS OCCUP	2	1	1	0	0	1	1	0
1728	PUBLIC SERVICE	61	37	35	19	10	44	27	4
1731	SMALL ENG REPAIR	21	12	12	6	3	15	9	1
1732	STATIONARY ENERGY SO	0	0	0	0	0	0	0	0
1700	TOTAL TRADES & INDUS	3452	2434	2249	986	462	2637	1633	234
9962	TOTAL SPECIAL PROGRA	45	71	47	24	13	45	27	3
9961	GROUP GUIDANCE (PREV	32	51	33	17	9	32	19	2
9963	REMEDIAL	13	20	13	7	3	13	7	0
9960	TOTAL SPECIAL PROGRA	90	142	93	48	25	90	53	5
TOTAL - ALL OSCE CODES		18613	11650	14771	5046	3537	10385	6508	1652

Adjusted by line item based upon 1970 placement ratios.

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SINGLE USOE CODE TABULATION

The following table (pages 49-57) is a summary of the present placement status of students enrolled in a Vocational Educational Program during the school year 1970-71. The students are listed by the USOE 4-digit code system by name. Twelve status possibilities are utilized for each of the USOE codes: (1) school attendance on the same level; (2) school attendance on a higher level; (3) school attendance within another vocational program; (4) dropped; (5) graduated; (6) in military service; (7) employment in related training; (8) employment in unrelated training; (9) unemployment; (10) deceased; (11) moved out of the district and; (12) status unknown. However, these categories are not mutually exclusive and any one student may be tabulated within any reasonable combination of categories (i.e., a pupil may be simultaneously listed as both graduated or in military service). Thus, vertical totals for sets, combinations, and/or a total student count will prove to be erroneous and should not be attempted. This information is available in other sections of this report.

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SUMMARY OF PUPIL STATUS BY USOE CODE TABULATION OF SINGLE STATUS CODES

SCHOOL SAME LEVEL	505	0100 UNSPEC. AGRICULTURE
SCHOOL HIGHER LEVEL	4513	0100 UNSPEC. AGRICULTURE
SCHOOL ANOTHER VOC	799	0100 UNSPEC. AGRICULTURE
DROPPED	899	0100 UNSPEC. AGRICULTURE
GRADUATED	1176	0100 UNSPEC. AGRICULTURE
MILITARY SERVICE	127	0100 UNSPEC. AGRICULTURE
EMPLOYED REL TRAIN	492	0100 UNSPEC. AGRICULTURE
EMPLOYED UNREL TRAIN	289	0100 UNSPEC. AGRICULTURE
UNEMPLOYED	63	0100 UNSPEC. AGRICULTURE
DECEASED	18	0100 UNSPEC. AGRICULTURE
MOVED OUT OF DIST	200	0100 UNSPEC. AGRICULTURE
STATUS UNKNOWN	463	0100 UNSPEC. AGRICULTURE
SCHOOL SAME LEVEL	1153	0101 AGRIC PROD
SCHOOL HIGHER LEVEL	5206	0101 AGRIC PROD
SCHOOL ANOTHER VOC	1305	0101 AGRIC PROD
DROPPED	1474	0101 AGRIC PROD
GRADUATED	1489	0101 AGRIC PROD
MILITARY SERVICE	178	0101 AGRIC PROD
EMPLOYED REL TRAIN	869	0101 AGRIC PROD
EMPLOYED UNREL TRAIN	371	0101 AGRIC PROD
UNEMPLOYED	136	0101 AGRIC PROD
DECEASED	15	0101 AGRIC PROD
MOVED OUT OF DIST	222	0101 AGRIC PROD
STATUS UNKNOWN	526	0101 AGRIC PROD
SCHOOL HIGHER LEVEL	39	0102 AGRIC SUPPLIES/SERVI
SCHOOL ANOTHER VOC	9	0102 AGRIC SUPPLIES/SERVI
DROPPED	3	0102 AGRIC SUPPLIES/SERVI
GRADUATED	19	0102 AGRIC SUPPLIES/SERVI
MILITARY SERVICE	1	0102 AGRIC SUPPLIES/SERVI
EMPLOYED REL TRAIN	7	0102 AGRIC SUPPLIES/SERVI
EMPLOYED UNREL TRAIN	2	0102 AGRIC SUPPLIES/SERVI
MOVED OUT OF DIST	1	0102 AGRIC SUPPLIES/SERVI
SCHOOL SAME LEVEL	82	0103 AGRIC MECHANICS
SCHOOL HIGHER LEVEL	543	0103 AGRIC MECHANICS
SCHOOL ANOTHER VOC	79	0103 AGRIC MECHANICS
DROPPED	186	0103 AGRIC MECHANICS
GRADUATED	127	0103 AGRIC MECHANICS
MILITARY SERVICE	13	0103 AGRIC MECHANICS
EMPLOYED REL TRAIN	51	0103 AGRIC MECHANICS
EMPLOYED UNREL TRAIN	25	0103 AGRIC MECHANICS
UNEMPLOYED	5	0103 AGRIC MECHANICS
DECEASED	2	0103 AGRIC MECHANICS
MOVED OUT OF DIST	24	0103 AGRIC MECHANICS
STATUS UNKNOWN	56	0103 AGRIC MECHANICS
SCHOOL SAME LEVEL	7	0105 ORNAMENTAL HORT
SCHOOL HIGHER LEVEL	238	0105 ORNAMENTAL HORT
SCHOOL ANOTHER VOC	97	0105 ORNAMENTAL HORT
DROPPED	26	0105 ORNAMENTAL HORT
GRADUATED	67	0105 ORNAMENTAL HORT
MILITARY SERVICE	15	0105 ORNAMENTAL HORT
EMPLOYED REL TRAIN	27	0105 ORNAMENTAL HORT
EMPLOYED UNREL TRAIN	22	0105 ORNAMENTAL HORT
UNEMPLOYED	1	0105 ORNAMENTAL HORT
DECEASED	1	0105 ORNAMENTAL HORT
MOVED OUT OF DIST	20	0105 ORNAMENTAL HORT
STATUS UNKNOWN	17	0105 ORNAMENTAL HORT
SCHOOL SAME LEVEL	5	0106 AGRIC RESOURCES
SCHOOL HIGHER LEVEL	39	0106 AGRIC RESOURCES

SCHOOL ANOTHER VOC	4	0106 AGRIC RESOURCES
DROPPED	8	0106 AGRIC RESOURCES
GRADUATED	13	0106 AGRIC RESOURCES
MILITARY SERVICE	2	0106 AGRIC RESOURCES
EMPLOYED REL TRAIN	1	0106 AGRIC RESOURCES
EMPLOYED UNREL TRAIN	4	0106 AGRIC RESOURCES
MOVED OUT OF DIST	6	0106 AGRIC RESOURCES
STATUS UNKNOWN	5	0106 AGRIC RESOURCES
SCHOOL HIGHER LEVEL	2	0107 FORESTRY
GRADUATED	13	0107 FORESTRY
EMPLOYED REL TRAIN	4	0107 FORESTRY
EMPLOYED UNREL TRAIN	3	0107 FORESTRY
UNEMPLOYED	2	0107 FORESTRY
STATUS UNKNOWN	2	0107 FORESTRY
SCHOOL SAME LEVEL	16	0199 OTHER AGRIC
SCHOOL HIGHER LEVEL	170	0199 OTHER AGRIC
SCHOOL ANOTHER VOC	136	0199 OTHER AGRIC
DROPPED	56	0199 OTHER AGRIC
GRADUATED	16	0199 OTHER AGRIC
MILITARY SERVICE	6	0199 OTHER AGRIC
EMPLOYED REL TRAIN	21	0199 OTHER AGRIC
EMPLOYED UNREL TRAIN	4	0199 OTHER AGRIC
UNEMPLOYED	6	0199 OTHER AGRIC
MOVED OUT OF DIST	12	0199 OTHER AGRIC
STATUS UNKNOWN	6	0199 OTHER AGRIC
SCHOOL SAME LEVEL	212	0400 UNSPEC. DISTRIBUTION
SCHOOL HIGHER LEVEL	1456	0400 UNSPEC. DISTRIBUTION
SCHOOL ANOTHER VOC	266	0400 UNSPEC. DISTRIBUTION
DROPPED	481	0400 UNSPEC. DISTRIBUTION
GRADUATED	1812	0400 UNSPEC. DISTRIBUTION
MILITARY SERVICE	135	0400 UNSPEC. DISTRIBUTION
EMPLOYED REL TRAIN	1281	0400 UNSPEC. DISTRIBUTION
EMPLOYED UNREL TRAIN	190	0400 UNSPEC. DISTRIBUTION
UNEMPLOYED	181	0400 UNSPEC. DISTRIBUTION
DECEASED	6	0400 UNSPEC. DISTRIBUTION
MOVED OUT OF DIST	130	0400 UNSPEC. DISTRIBUTION
STATUS UNKNOWN	345	0400 UNSPEC. DISTRIBUTION
SCHOOL SAME LEVEL	56	0401 ADVERTISING SERV
SCHOOL HIGHER LEVEL	1	0401 ADVERTISING SERV
SCHOOL ANOTHER VOC	40	0401 ADVERTISING SERV
GRADUATED	4	0401 ADVERTISING SERV
EMPLOYED REL TRAIN	2	0401 ADVERTISING SERV
EMPLOYED UNREL TRAIN	2	0401 ADVERTISING SERV
MOVED OUT OF DIST	3	0401 ADVERTISING SERV
STATUS UNKNOWN	9	0401 ADVERTISING SERV
SCHOOL HIGHER LEVEL	44	0406 FOOD DISTRIBUTION
DROPPED	5	0406 FOOD DISTRIBUTION
GRADUATED	22	0406 FOOD DISTRIBUTION
MILITARY SERVICE	2	0406 FOOD DISTRIBUTION
EMPLOYED REL TRAIN	6	0406 FOOD DISTRIBUTION
EMPLOYED UNREL TRAIN	2	0406 FOOD DISTRIBUTION
MOVED OUT OF DIST	3	0406 FOOD DISTRIBUTION
SCHOOL SAME LEVEL	16	0499 OTHER DIST
SCHOOL HIGHER LEVEL	20	0499 OTHER DIST
SCHOOL ANOTHER VOC	3	0499 OTHER DIST
DROPPED	11	0499 OTHER DIST
GRADUATED	44	0499 OTHER DIST
EMPLOYED REL TRAIN	51	0499 OTHER DIST
EMPLOYED UNREL TRAIN	6	0499 OTHER DIST
UNEMPLOYED	4	0499 OTHER DIST

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MOVED OUT OF DIST	1	0499	OTHER DIST
STATUS UNKNOWN	8	0499	OTHER DIST
SCHOOL SAME LEVEL	2	0703	NURSING
SCHOOL HIGHER LEVEL	85	0703	NURSING
DROPPED	5	0703	NURSING
GRADUATED	38	0703	NURSING
EMPLOYED REL TRAIN	3	0703	NURSING
UNEMPLOYED	15	0703	NURSING
MOVED OUT OF DIST	1	0703	NURSING
STATUS UNKNOWN	2	0703	NURSING
SCHOOL HIGHER LEVEL	25	0709	MISC. MEDICAL
SCHOOL ANOTHER VOC	7	0709	MISC. MEDICAL
DROPPED	16	0709	MISC. MEDICAL
GRADUATED	60	0709	MISC. MEDICAL
MILITARY SERVICE	1	0709	MISC. MEDICAL
EMPLOYED REL TRAIN	24	0709	MISC. MEDICAL
EMPLOYED UNREL TRAIN	14	0709	MISC. MEDICAL
UNEMPLOYED	23	0709	MISC. MEDICAL
MOVED OUT OF DIST	3	0709	MISC. MEDICAL
STATUS UNKNOWN	16	0709	MISC. MEDICAL
SCHOOL HIGHER LEVEL	104	0799	OTHER HEALTH
SCHOOL ANOTHER VOC	34	0799	OTHER HEALTH
DROPPED	34	0799	OTHER HEALTH
GRADUATED	84	0799	OTHER HEALTH
EMPLOYED REL TRAIN	30	0799	OTHER HEALTH
EMPLOYED UNREL TRAIN	19	0799	OTHER HEALTH
UNEMPLOYED	5	0799	OTHER HEALTH
MOVED OUT OF DIST	8	0799	OTHER HEALTH
STATUS UNKNOWN	7	0799	OTHER HEALTH
SCHOOL SAME LEVEL	2170	0901	CONSUMER & HOMEMAKIN
SCHOOL HIGHER LEVEL	23221	0901	CONSUMER & HOMEMAKIN
SCHOOL ANOTHER VOC	7720	0901	CONSUMER & HOMEMAKIN
DROPPED	4270	0901	CONSUMER & HOMEMAKIN
GRADUATED	5575	0901	CONSUMER & HOMEMAKIN
MILITARY SERVICE	67	0901	CONSUMER & HOMEMAKIN
EMPLOYED REL TRAIN	958	0901	CONSUMER & HOMEMAKIN
EMPLOYED UNREL TRAIN	605	0901	CONSUMER & HOMEMAKIN
UNEMPLOYED	758	0901	CONSUMER & HOMEMAKIN
DECEASED	20	0901	CONSUMER & HOMEMAKIN
MOVED OUT OF DIST	1469	0901	CONSUMER & HOMEMAKIN
STATUS UNKNOWN	4020	0901	CONSUMER & HOMEMAKIN
SCHOOL SAME LEVEL	13	0902	TOTAL OCCUP PREP
SCHOOL HIGHER LEVEL	354	0902	TOTAL OCCUP PREP
SCHOOL ANOTHER VOC	168	0902	TOTAL OCCUP PREP
DROPPED	52	0902	TOTAL OCCUP PREP
GRADUATED	231	0902	TOTAL OCCUP PREP
MILITARY SERVICE	11	0902	TOTAL OCCUP PREP
EMPLOYED REL TRAIN	66	0902	TOTAL OCCUP PREP
EMPLOYED UNREL TRAIN	75	0902	TOTAL OCCUP PREP
UNEMPLOYED	68	0902	TOTAL OCCUP PREP
DECEASED	2	0902	TOTAL OCCUP PREP
MOVED OUT OF DIST	47	0902	TOTAL OCCUP PREP
STATUS UNKNOWN	85	0902	TOTAL OCCUP PREP
SCHOOL SAME LEVEL	41	1400	UNSPEC. OFFICE
SCHOOL HIGHER LEVEL	320	1400	UNSPEC. OFFICE
SCHOOL ANOTHER VOC	108	1400	UNSPEC. OFFICE
DROPPED	75	1400	UNSPEC. OFFICE
GRADUATED	579	1400	UNSPEC. OFFICE
MILITARY SERVICE	5	1400	UNSPEC. OFFICE
EMPLOYED REL TRAIN	280	1400	UNSPEC. OFFICE

EMPLOYED UNREL TRAIN	59	1400 UNSPEC. OFFICE
UNEMPLOYED	72	1400 UNSPEC. OFFICE
DECEASED	2	1400 UNSPEC. OFFICE
MOVED OUT OF DIST	31	1400 UNSPEC. OFFICE
STATUS UNKNOWN	62	1400 UNSPEC. OFFICE
SCHOOL HIGHER LEVEL	35	1401 ACCOUNTING & COMPUTI
SCHOOL ANOTHER VOC	1	1401 ACCOUNTING & COMPUTI
DROPPED	9	1401 ACCOUNTING & COMPUTI
GRADUATED	56	1401 ACCOUNTING & COMPUTI
EMPLOYED REL TRAIN	16	1401 ACCOUNTING & COMPUTI
EMPLOYED UNREL TRAIN	2	1401 ACCOUNTING & COMPUTI
UNEMPLOYED	3	1401 ACCOUNTING & COMPUTI
STATUS UNKNOWN	3	1401 ACCOUNTING & COMPUTI
SCHOOL HIGHER LEVEL	28	1402 BUS DATA PROCESSING
SCHOOL ANOTHER VOC	8	1402 BUS DATA PROCESSING
DROPPED	2	1402 BUS DATA PROCESSING
GRADUATED	57	1402 BUS DATA PROCESSING
MILITARY SERVICE	2	1402 BUS DATA PROCESSING
EMPLOYED REL TRAIN	14	1402 BUS DATA PROCESSING
EMPLOYED UNREL TRAIN	15	1402 BUS DATA PROCESSING
UNEMPLOYED	5	1402 BUS DATA PROCESSING
MOVED OUT OF DIST	9	1402 BUS DATA PROCESSING
STATUS UNKNOWN	12	1402 BUS DATA PROCESSING
SCHOOL SAME LEVEL	38	1403 FILING, OFFICE MACH
SCHOOL HIGHER LEVEL	962	1403 FILING, OFFICE MACH
SCHOOL ANOTHER VOC	228	1403 FILING, OFFICE MACH
DROPPED	190	1403 FILING, OFFICE MACH
GRADUATED	1033	1403 FILING, OFFICE MACH
MILITARY SERVICE	8	1403 FILING, OFFICE MACH
EMPLOYED REL TRAIN	409	1403 FILING, OFFICE MACH
EMPLOYED UNREL TRAIN	116	1403 FILING, OFFICE MACH
UNEMPLOYED	163	1403 FILING, OFFICE MACH
MOVED OUT OF DIST	87	1403 FILING, OFFICE MACH
STATUS UNKNOWN	192	1403 FILING, OFFICE MACH
SCHOOL SAME LEVEL	68	1407 STENO, SECY, & RELAT
SCHOOL HIGHER LEVEL	424	1407 STENO, SECY, & RELAT
SCHOOL ANOTHER VOC	89	1407 STENO, SECY, & RELAT
DROPPED	94	1407 STENO, SECY, & RELAT
GRADUATED	706	1407 STENO, SECY, & RELAT
MILITARY SERVICE	1	1407 STENO, SECY, & RELAT
EMPLOYED REL TRAIN	380	1407 STENO, SECY, & RELAT
EMPLOYED UNREL TRAIN	87	1407 STENO, SECY, & RELAT
UNEMPLOYED	100	1407 STENO, SECY, & RELAT
DECEASED	2	1407 STENO, SECY, & RELAT
MOVED OUT OF DIST	29	1407 STENO, SECY, & RELAT
STATUS UNKNOWN	50	1407 STENO, SECY, & RELAT
SCHOOL HIGHER LEVEL	24	1409 TYPING & RELATED OCC
SCHOOL ANOTHER VOC	59	1409 TYPING & RELATED OCC
DROPPED	4	1409 TYPING & RELATED OCC
GRADUATED	1	1409 TYPING & RELATED OCC
EMPLOYED REL TRAIN	11	1409 TYPING & RELATED OCC
UNEMPLOYED	2	1409 TYPING & RELATED OCC
MOVED OUT OF DIST	1	1409 TYPING & RELATED OCC
STATUS UNKNOWN	3	1409 TYPING & RELATED OCC
SCHOOL SAME LEVEL	1	1601 TECHNOLOGY
SCHOOL HIGHER LEVEL	44	1601 TECHNOLOGY
SCHOOL ANOTHER VOC	6	1601 TECHNOLOGY
DROPPED	6	1601 TECHNOLOGY
GRADUATED	19	1601 TECHNOLOGY
MILITARY SERVICE	1	1601 TECHNOLOGY

EMPLOYED REL TRAIN	11	1601 TECHNOLOGY
EMPLOYED UNREL TRAIN	3	1601 TECHNOLOGY
MOVED OUT OF DIST	3	1601 TECHNOLOGY
STATUS UNKNOWN	2	1601 TECHNOLOGY
SCHOOL SAME LEVEL	106	1700 UNSPEC. TRADES & IND
SCHOOL HIGHER LEVEL	491	1700 UNSPEC. TRADES & IND
SCHOOL ANOTHER VOC	68	1700 UNSPEC. TRADES & IND
DROPPED	149	1700 UNSPEC. TRADES & IND
GRADUATED	700	1700 UNSPEC. TRADES & IND
MILITARY SERVICE	70	1700 UNSPEC. TRADES & IND
EMPLOYED REL TRAIN	427	1700 UNSPEC. TRADES & IND
EMPLOYED UNREL TRAIN	134	1700 UNSPEC. TRADES & IND
UNEMPLOYED	65	1700 UNSPEC. TRADES & IND
DECEASED	3	1700 UNSPEC. TRADES & IND
MOVED OUT OF DIST	47	1700 UNSPEC. TRADES & IND
STATUS UNKNOWN	95	1700 UNSPEC. TRADES & IND
SCHOOL SAME LEVEL	6	1701 AIR CONDITIONING
SCHOOL HIGHER LEVEL	93	1701 AIR CONDITIONING
SCHOOL ANOTHER VOC	31	1701 AIR CONDITIONING
DROPPED	22	1701 AIR CONDITIONING
GRADUATED	27	1701 AIR CONDITIONING
MILITARY SERVICE	10	1701 AIR CONDITIONING
EMPLOYED REL TRAIN	29	1701 AIR CONDITIONING
EMPLOYED UNREL TRAIN	5	1701 AIR CONDITIONING
UNEMPLOYED	3	1701 AIR CONDITIONING
MOVED OUT OF DIST	10	1701 AIR CONDITIONING
STATUS UNKNOWN	18	1701 AIR CONDITIONING
SCHOOL HIGHER LEVEL	51	1702 APPLIANCE REPAIR
SCHOOL ANOTHER VOC	25	1702 APPLIANCE REPAIR
DROPPED	14	1702 APPLIANCE REPAIR
GRADUATED	24	1702 APPLIANCE REPAIR
MILITARY SERVICE	5	1702 APPLIANCE REPAIR
EMPLOYED REL TRAIN	3	1702 APPLIANCE REPAIR
EMPLOYED UNREL TRAIN	9	1702 APPLIANCE REPAIR
UNEMPLOYED	3	1702 APPLIANCE REPAIR
DECEASED	1	1702 APPLIANCE REPAIR
MOVED OUT OF DIST	2	1702 APPLIANCE REPAIR
STATUS UNKNOWN	11	1702 APPLIANCE REPAIR
SCHOOL SAME LEVEL	129	1703 AUTOMOTIVE SERVICES
SCHOOL HIGHER LEVEL	680	1703 AUTOMOTIVE SERVICES
SCHOOL ANOTHER VOC	248	1703 AUTOMOTIVE SERVICES
DROPPED	252	1703 AUTOMOTIVE SERVICES
GRADUATED	408	1703 AUTOMOTIVE SERVICES
MILITARY SERVICE	60	1703 AUTOMOTIVE SERVICES
EMPLOYED REL TRAIN	194	1703 AUTOMOTIVE SERVICES
EMPLOYED UNREL TRAIN	171	1703 AUTOMOTIVE SERVICES
UNEMPLOYED	31	1703 AUTOMOTIVE SERVICES
DECEASED	5	1703 AUTOMOTIVE SERVICES
MOVED OUT OF DIST	41	1703 AUTOMOTIVE SERVICES
STATUS UNKNOWN	150	1703 AUTOMOTIVE SERVICES
SCHOOL SAME LEVEL	2	1707 CML ART OCCUP
SCHOOL HIGHER LEVEL	86	1707 CML ART OCCUP
SCHOOL ANOTHER VOC	13	1707 CML ART OCCUP
DROPPED	16	1707 CML ART OCCUP
GRADUATED	38	1707 CML ART OCCUP
MILITARY SERVICE	3	1707 CML ART OCCUP
EMPLOYED REL TRAIN	24	1707 CML ART OCCUP
EMPLOYED UNREL TRAIN	2	1707 CML ART OCCUP
UNEMPLOYED	5	1707 CML ART OCCUP
MOVED OUT OF DIST	8	1707 CML ART OCCUP

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STATUS UNKNOWN	15	1707 CML ART OCCUP
SCHOOL HIGHER LEVEL	18	1709 CML PHOTOG OCCUP
SCHOOL ANOTHER VOC	3	1709 CML PHOTOG OCCUP
DROPPED	12	1709 CML PHOTOG OCCUP
GRADUATED	7	1709 CML PHOTOG OCCUP
MILITARY SERVICE	1	1709 CML PHOTOG OCCUP
EMPLOYED REL TRAIN	3	1709 CML PHOTOG OCCUP
EMPLOYED UNREL TRAIN	3	1709 CML PHOTOG OCCUP
MOVED OUT OF DIST	1	1709 CML PHOTOG OCCUP
SCHOOL SAME LEVEL	137	1710 CONSTR & MAINT
SCHOOL HIGHER LEVEL	906	1710 CONSTR & MAINT
SCHOOL ANOTHER VOC	297	1710 CONSTR & MAINT
DROPPED	402	1710 CONSTR & MAINT
GRADUATED	611	1710 CONSTR & MAINT
MILITARY SERVICE	81	1710 CONSTR & MAINT
EMPLOYED REL TRAIN	296	1710 CONSTR & MAINT
EMPLOYED UNREL TRAIN	192	1710 CONSTR & MAINT
UNEMPLOYED	60	1710 CONSTR & MAINT
DECEASED	3	1710 CONSTR & MAINT
MOVED OUT OF DIST	89	1710 CONSTR & MAINT
STATUS UNKNOWN	210	1710 CONSTR & MAINT
SCHOOL SAME LEVEL	38	1713 DRAFTING OCCUP
SCHOOL HIGHER LEVEL	299	1713 DRAFTING OCCUP
SCHOOL ANOTHER VOC	56	1713 DRAFTING OCCUP
DROPPED	55	1713 DRAFTING OCCUP
GRADUATED	142	1713 DRAFTING OCCUP
MILITARY SERVICE	16	1713 DRAFTING OCCUP
EMPLOYED REL TRAIN	35	1713 DRAFTING OCCUP
EMPLOYED UNREL TRAIN	29	1713 DRAFTING OCCUP
UNEMPLOYED	7	1713 DRAFTING OCCUP
DECEASED	2	1713 DRAFTING OCCUP
MOVED OUT OF DIST	22	1713 DRAFTING OCCUP
STATUS UNKNOWN	45	1713 DRAFTING OCCUP
SCHOOL SAME LEVEL	12	1714 ELEC OCCUP
SCHOOL HIGHER LEVEL	82	1714 ELEC OCCUP
SCHOOL ANOTHER VOC	13	1714 ELEC OCCUP
DROPPED	32	1714 ELEC OCCUP
GRADUATED	49	1714 ELEC OCCUP
MILITARY SERVICE	10	1714 ELEC OCCUP
EMPLOYED REL TRAIN	16	1714 ELEC OCCUP
EMPLOYED UNREL TRAIN	22	1714 ELEC OCCUP
UNEMPLOYED	2	1714 ELEC OCCUP
MOVED OUT OF DIST	5	1714 ELEC OCCUP
STATUS UNKNOWN	10	1714 ELEC OCCUP
SCHOOL SAME LEVEL	8	1715 ELECTRONIC OCCUP
SCHOOL HIGHER LEVEL	206	1715 ELECTRONIC OCCUP
SCHOOL ANOTHER VOC	48	1715 ELECTRONIC OCCUP
DROPPED	87	1715 ELECTRONIC OCCUP
GRADUATED	113	1715 ELECTRONIC OCCUP
MILITARY SERVICE	9	1715 ELECTRONIC OCCUP
EMPLOYED REL TRAIN	38	1715 ELECTRONIC OCCUP
EMPLOYED UNREL TRAIN	51	1715 ELECTRONIC OCCUP
UNEMPLOYED	16	1715 ELECTRONIC OCCUP
DECEASED	1	1715 ELECTRONIC OCCUP
MOVED OUT OF DIST	19	1715 ELECTRONIC OCCUP
STATUS UNKNOWN	71	1715 ELECTRONIC OCCUP
SCHOOL SAME LEVEL	90	1718 GENERAL CONTINUATION
SCHOOL HIGHER LEVEL	231	1718 GENERAL CONTINUATION
SCHOOL ANOTHER VOC	206	1718 GENERAL CONTINUATION
DROPPED	17	1718 GENERAL CONTINUATION

MOVED OUT OF DIST	10	1718	GENERAL CONTINUATION
STATUS UNKNOWN	26	1718	GENERAL CONTINUATION
SCHOOL SAME LEVEL	1	1719	GRAPHICS ARTS OCCUP
SCHOOL HIGHER LEVEL	64	1719	GRAPHICS ARTS OCCUP
SCHOOL ANOTHER VOC	11	1719	GRAPHICS ARTS OCCUP
DROPPED	37	1719	GRAPHICS ARTS OCCUP
GRADUATED	61	1719	GRAPHICS ARTS OCCUP
MILITARY SERVICE	14	1719	GRAPHICS ARTS OCCUP
EMPLOYED REL TRAIN	28	1719	GRAPHICS ARTS OCCUP
EMPLOYED UNREL TRAIN	21	1719	GRAPHICS ARTS OCCUP
UNEMPLOYED	5	1719	GRAPHICS ARTS OCCUP
DECEASED	1	1719	GRAPHICS ARTS OCCUP
MOVED OUT OF DIST	2	1719	GRAPHICS ARTS OCCUP
STATUS UNKNOWN	1	1719	GRAPHICS ARTS OCCUP
SCHOOL HIGHER LEVEL	16	1721	INSTR MAINT & REPAIR
SCHOOL ANOTHER VOC	1	1721	INSTR MAINT & REPAIR
DROPPED	7	1721	INSTR MAINT & REPAIR
GRADUATED	11	1721	INSTR MAINT & REPAIR
EMPLOYED REL TRAIN	8	1721	INSTR MAINT & REPAIR
UNEMPLOYED	1	1721	INSTR MAINT & REPAIR
MOVED OUT OF DIST	9	1721	INSTR MAINT & REPAIR
STATUS UNKNOWN	3	1721	INSTR MAINT & REPAIR
SCHOOL SAME LEVEL	44	1723	METALWORKING OCCUP
SCHOOL HIGHER LEVEL	434	1723	METALWORKING OCCUP
SCHOOL ANOTHER VOC	102	1723	METALWORKING OCCUP
DROPPED	239	1723	METALWORKING OCCUP
GRADUATED	286	1723	METALWORKING OCCUP
MILITARY SERVICE	52	1723	METALWORKING OCCUP
EMPLOYED REL TRAIN	179	1723	METALWORKING OCCUP
EMPLOYED UNREL TRAIN	115	1723	METALWORKING OCCUP
UNEMPLOYED	29	1723	METALWORKING OCCUP
DECEASED	2	1723	METALWORKING OCCUP
MOVED OUT OF DIST	38	1723	METALWORKING OCCUP
STATUS UNKNOWN	93	1723	METALWORKING OCCUP
SCHOOL SAME LEVEL	8	1726	PERSONAL SERV
SCHOOL HIGHER LEVEL	542	1726	PERSONAL SERV
SCHOOL ANOTHER VOC	154	1726	PERSONAL SERV
DROPPED	240	1726	PERSONAL SERV
GRADUATED	152	1726	PERSONAL SERV
EMPLOYED REL TRAIN	118	1726	PERSONAL SERV
EMPLOYED UNREL TRAIN	20	1726	PERSONAL SERV
UNEMPLOYED	30	1726	PERSONAL SERV
DECEASED	1	1726	PERSONAL SERV
MOVED OUT OF DIST	51	1726	PERSONAL SERV
STATUS UNKNOWN	89	1726	PERSONAL SERV
SCHOOL SAME LEVEL	1	1729	QTY FOOD OCCUP
SCHOOL HIGHER LEVEL	73	1729	QTY FOOD OCCUP
SCHOOL ANOTHER VOC	20	1729	QTY FOOD OCCUP
DROPPED	52	1729	QTY FOOD OCCUP
GRADUATED	35	1729	QTY FOOD OCCUP
MILITARY SERVICE	2	1729	QTY FOOD OCCUP
EMPLOYED REL TRAIN	25	1729	QTY FOOD OCCUP
EMPLOYED UNREL TRAIN	2	1729	QTY FOOD OCCUP
UNEMPLOYED	5	1729	QTY FOOD OCCUP
MOVED OUT OF DIST	7	1729	QTY FOOD OCCUP
STATUS UNKNOWN	23	1729	QTY FOOD OCCUP
SCHOOL SAME LEVEL	11	1730	REFRIGERATION
SCHOOL HIGHER LEVEL	29	1730	REFRIGERATION
SCHOOL ANOTHER VOC	10	1730	REFRIGERATION
DROPPED	18	1730	REFRIGERATION

GRADUATED	15	1730 REFRIGERATION
MILITARY SERVICE	7	1730 REFRIGERATION
EMPLOYED REL TRAIN	4	1730 REFRIGERATION
EMPLOYED UNREL TRAIN	13	1730 REFRIGERATION
UNEMPLOYED	5	1730 REFRIGERATION
MOVED OUT OF DIST	3	1730 REFRIGERATION
STATUS UNKNOWN	4	1730 REFRIGERATION
SCHOOL SAME LEVEL	3	1733 TEXTILE PROD & FAB
SCHOOL HIGHER LEVEL	77	1733 TEXTILE PROD & FAB
SCHOOL ANOTHER VOC	21	1733 TEXTILE PROD & FAB
DROPPED	79	1733 TEXTILE PROD & FAB
GRADUATED	46	1733 TEXTILE PROD & FAB
MILITARY SERVICE	3	1733 TEXTILE PROD & FAB
EMPLOYED REL TRAIN	30	1733 TEXTILE PROD & FAB
EMPLOYED UNREL TRAIN	5	1733 TEXTILE PROD & FAB
UNEMPLOYED	5	1733 TEXTILE PROD & FAB
MOVED OUT OF DIST	13	1733 TEXTILE PROD & FAB
STATUS UNKNOWN	35	1733 TEXTILE PROD & FAB
SCHOOL SAME LEVEL	3	1734 LEATHER WORKING
SCHOOL HIGHER LEVEL	34	1734 LEATHER WORKING
SCHOOL ANOTHER VOC	9	1734 LEATHER WORKING
DROPPED	14	1734 LEATHER WORKING
GRADUATED	14	1734 LEATHER WORKING
MILITARY SERVICE	5	1734 LEATHER WORKING
EMPLOYED REL TRAIN	6	1734 LEATHER WORKING
DECEASED	1	1734 LEATHER WORKING
STATUS UNKNOWN	6	1734 LEATHER WORKING
SCHOOL SAME LEVEL	1	1735 UPHOLSTERING
SCHOOL HIGHER LEVEL	19	1735 UPHOLSTERING
SCHOOL ANOTHER VOC	2	1735 UPHOLSTERING
DROPPED	16	1735 UPHOLSTERING
GRADUATED	4	1735 UPHOLSTERING
MILITARY SERVICE	4	1735 UPHOLSTERING
EMPLOYED REL TRAIN	2	1735 UPHOLSTERING
EMPLOYED UNREL TRAIN	1	1735 UPHOLSTERING
MOVED OUT OF DIST	3	1735 UPHOLSTERING
STATUS UNKNOWN	7	1735 UPHOLSTERING
SCHOOL SAME LEVEL	32	1736 WOODWORKING OCCUP
SCHOOL HIGHER LEVEL	145	1736 WOODWORKING OCCUP
SCHOOL ANOTHER VOC	43	1736 WOODWORKING OCCUP
DROPPED	61	1736 WOODWORKING OCCUP
GRADUATED	52	1736 WOODWORKING OCCUP
MILITARY SERVICE	20	1736 WOODWORKING OCCUP
EMPLOYED REL TRAIN	32	1736 WOODWORKING OCCUP
EMPLOYED UNREL TRAIN	30	1736 WOODWORKING OCCUP
UNEMPLOYED	2	1736 WOODWORKING OCCUP
MOVED OUT OF DIST	8	1736 WOODWORKING OCCUP
STATUS UNKNOWN	22	1736 WOODWORKING OCCUP
SCHOOL SAME LEVEL	75	1799 OTHER TR&IND
SCHOOL HIGHER LEVEL	258	1799 OTHER TR&IND
SCHOOL ANOTHER VOC	60	1799 OTHER TR&IND
DROPPED	90	1799 OTHER TR&IND
GRADUATED	310	1799 OTHER TR&IND
MILITARY SERVICE	34	1799 OTHER TR&IND
EMPLOYED REL TRAIN	213	1799 OTHER TR&IND
EMPLOYED UNREL TRAIN	56	1799 OTHER TR&IND
UNEMPLOYED	16	1799 OTHER TR&IND
DECEASED	1	1799 OTHER TR&IND
MOVED OUT OF DIST	35	1799 OTHER TR&IND
STATUS UNKNOWN	114	1799 OTHER TR&IND

SCHOOL SAME LEVEL	25	9900	TOTAL SPECIAL PROGRA
SCHOOL HIGHER LEVEL	146	9900	TOTAL SPECIAL PROGRA
SCHOOL ANOTHER VOC	14	9900	TOTAL SPECIAL PROGRA
DROPPED	47	9900	TOTAL SPECIAL PROGRA
GRADUATED	30	9900	TOTAL SPECIAL PROGRA
MILITARY SERVICE	6	9900	TOTAL SPECIAL PROGRA
EMPLOYED REL TRAIN	36	9900	TOTAL SPECIAL PROGRA
EMPLOYED UNREL TRAIN	14	9900	TOTAL SPECIAL PROGRA
UNEMPLOYED	2	9900	TOTAL SPECIAL PROGRA
MOVED OUT OF DIST	6	9900	TOTAL SPECIAL PROGRA
STATUS UNKNOWN	105	9900	TOTAL SPECIAL PROGRA

STATUS - 1971-1972

Students and Teachers by Geographic Area

Data has been entered into matrices in response to specific questions asked by the State Advisory Council relating to the status of vocational-technical education. The matrices used both digest lineally and cross tabulate multidimensionally all of the specific questions answered. Matrix formats are reused in various sections, and therefore it is necessary to understand the interrelationships of the basic matrices as they are used and applied to different subsets of data. Data will be encountered in this order: Grand Totals (Students), Grand Totals (Teachers), and Regional Totals (West, Middle, and East). Each geographic division includes a lineal tally of all USOE code numbers by number and name occuring within the respective geographic area.

Data in this section is reported for the school year 1971-72 during the period February-June and is compiled in full-time regular secondary courses only. Data is presented as collected and verified by the teachers of respective classes on optical scan sheets and systematized by the use of programmed texts entitled "A Guide for Completing the Vocational-Technical Student Enrollment Information Form" and "A Guide for Completing the Vocational-Technical Personnel Information Sheet." The accuracy of all data is based upon the cooperation of each individual administration and/or teacher reporting under the above mentioned criteria.

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TALLY OF STATISTICS FOR STUDENTS *
GRAND TOTALS

TYPE OF SCHOOL	NO INF	ELEM.	J.H.S.	H.SCH	PRIVAT	P.S.A.	T.INST	C.COL.	S&PSC.	OTHER
	0	0	7264	85225	96	0	0	0	0	0
	0%	0%	8%	92%	0%	0%	0%	0%	0%	0%

SEX	NO.INFOR.	MALE	FEMALE
	0	34465	51965
	0%	40%	60%

MARITAL STATUS	NO.INFOR.	SINGLE	MARRIED
	0	84789	1641
	0%	98%	2%

VETERAN		YES	NO
	0	2363	84067
	0%	2%	98%

EDUCATION	NO INFO	K-GARDEN	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8
	0	0	0	0	0	0	0	84	190	1174
	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%

GRADE 9	GRADE 10	GRADE 11	GRADE 12
23067	21448	21087	19374
27%	25%	25%	22%

RACE	NO INFO	CAUCA.	BLACK	A.IND.	ORIENT.	SP.AMER	OTHER
	0	66794	19083	172	44	146	192
	0%	77%	22%	.2%	0%	.2%	.2%

BENEFITS EXPECTED	NONE	G.I.BILL	V.A.DISB	VOC.REHA	SOC.SEC.	WK STUDY	OTHER
	70626	223	801	1298	6022	2500	6139
	81%	0%	0%	1%	6%	2%	7%

PRIOR TRAINING	NONE	DISTRI	AGRIC	HEALTH	HOME.EC	OC.H.EC.	OFF.OCC.	TRADEIND	TECH I.
	20340	4533	15453	7341	38303	1101	5978	10528	931
	23%	5%	17%	8%	44%	1%	6%	12%	1%

PLANS ADVANCED TRAINING	NO INFO	NONE	HIGH SCH	A.VOC.SC	TECH IN.	COM COLL	PRI.V.S.	4-YR COL	OTHER
	6154	15406	46326	5701	1291	1573	467	5975	3537
	7%	17%	53%	6%	1%	1%	0%	6%	4%

CLASSIFICATION	P.SEC.	A.PREP	A.SUP.	APPREN
	0	0	0	0
	0%	0%	0%	0%

REGULAR	DISADVANTAGED	HANDICAPPED
60822	22896	4355
70%	26%	5%

AVERAGE EDUCATION OF PUPILS NOT INCLUDING UNGRADED 10.38 NO OF STUDENTS 85565

AGE OF STUDENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	1	0	0	0	0	72	8	39	793	15133	18266	20456	19096	4959	1191

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
222	105	18	7	15	6	15	7	5	1	2	9	1	3	3	5	7	3	3	2

* 115 Students are shown in grand totals of "Type School" and "Number of Students by Program" that are not included in supporting data analysis./Origin: Nashville, Gibson County, Lewis County, DeKalb County.

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41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
3	5	2	5	1	6	0	3	3	4	0	2	2	1	1	1	3	0	0	0

61	62	63	64	65	66	67	68	69	70
3	1	0	1	5	6	7	4	0	2

AVERAGE TEACHER LOAD PER PROGRAM

NC INF	AGRIC	DISTRI	HEALTH	C&H.EC	O.H.ED	OFFICE	TECH.I	TRGIND	RELATD	ACADEM	OTHER
55	63	35	21	77	30	33	15	29	25	21	24
WORK.ST	REGULAR	ACADEMC	1020DISA	COOP.B	S.F.EXP	PREVOCA	REL.REM	RELATED	HANDI.	P.B DIS	COOP.G
43	53	62	37	30	80	49	36	51	16	42	33

NO OF STUDENTS BY PROGRAM

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND
18615	4760	1078	41749	1632	55	767	15053
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
66344	3796	1277	2343	981	182	3738	959	1649	3249

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND
NC.INF	452	111	44	794	15	118	16	265
REGULR	14462	2253	592	35562	244	4540	431	8005
ACADEM	771	105	27	2307	1	280	126	153
1028.D	649	15	3	48	1	31	25	323
COOPB	10	1526	85	11	4	176	0	522
COOPB	49	278	32	15	10	55	1	380
S.F.E.	3	0	0	81	0	0	0	4
PREV.	336	80	102	344	191	244	113	1907
R.R.	9	43	3	8	14	42	39	100
HAND.	33	45	83	109	343	0	0	897
P.B.DS	572	43	18	1205	349	99	16	540

NO OF STUDENTS BY PROGRAM BY SEX

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND
15775	2492	332	996	311	405	704	10008
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
22222	1186	943	1374	700	100	2565	632	1074	1458	M
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND			
486	1811	624	37668	825	4985	35	2356			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
41523	2432	92	879	281	81	1024	297	514	1648	F

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND
NC.INF	254	42	4	57	0	11	8	102
REGULR	13324	1134	183	798	28	234	388	5998
ACADEM	714	69	26	39	0	70	120	136
1028.D	538	1	0	10	1	1	24	228
COOPB	9	920	10	4	0	16	0	408
COOPB	49	181	6	3	2	28	1	302
S.F.E.	2	0	0	0	0	0	0	4
PREV.	324	53	36	6	34	32	108	1677
R.R.	8	34	2	3	0	2	39	60
HAND.	29	30	58	48	176	0	0	635
P.B.DS	524	28	7	38	70	11	16	458

M

NC.INF	9	20	29	413	4	97	1	46
REGULR	429	1049	396	33492	208	4154	31	1667
ACADEM	11	36	1	2154	1	204	0	11
1028.D	3	0	0	35	0	20	1	6
COOPB	1	553	73	7	4	155	0	84
COOPB	0	97	26	12	8	27	0	78

S.F.E.	1	0	0	80	0	0	0	0	
PREV.	4	25	65	326	154	206	2	128	
R.R.	1	4	1	4	14	34	0	40	
HAND.	4	14	23	52	159	0	0	235	
P.B.DS	23	13	10	1093	273	88	0	61	F

NO OF STUDENTS BY PROGRAM BY RACE

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
14425	3493	702	29288	378	4120	582	8829			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
5C71C	3201	841	1665	860	110	2764	518	976	969	CAUCA.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
1726	767	251	9106	754	1241	148	3433			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
12616	391	183	568	113	70	775	402	608	2121	BLACK
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
24	19	1	74	1	3	4	32			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
121	4	1	6	3	0	19	4	1	5	A.IND.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.EC	OFFICE	TECH.I	TR&IND			
7	0	0	22	0	3	1	10			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
32	0	1	0	0	0	7	1	0	3	ORIENT.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.EC	OFFICE	TECH.I	TR&IND			
25	12	0	64	1	12	1	17			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
96	7	4	4	0	0	15	1	1	4	SP.AMER
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
43	13	2	84	1	7	3	28			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
131	15	4	12	1	0	9	1	0	4	OTHER

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND	
NO.INF	232	57	27	300	2	84	9	99	
REGULR	12324	1835	365	26649	161	3324	377	5491	
ACADEM	689	96	27	1932	0	261	71	119	
1028.D	491	0	0	18	0	19	17	135	
CCCPB	6	1093	71	3	4	119	0	364	
CCOPB	49	218	28	8	3	51	0	347	
S.F.E.	1	0	0	47	0	0	0	0	
PREV.	284	77	94	231	83	159	81	1371	
R.R.	7	35	1	5	9	32	18	44	
HAND.	14	44	78	86	107	0	0	537	
P.B.DS	324	38	11	9	9	71	9	322	CAUCA.
NO.INF	19	5	6	165	2	24	0	46	
REGULR	1348	320	211	7405	73	1043	37	2128	
ACADEM	34	9	0	243	1	10	48	26	
1028.D	44	1	0	25	1	1	8	97	
CCCPB	2	368	12	8	0	53	0	122	
CCOPB	0	57	4	7	7	4	1	28	
S.F.E.	2	0	0	33	0	0	0	3	
PREV.	42	1	8	85	103	76	29	408	
R.R.	2	3	2	2	5	3	18	55	
HAND.	19	0	2	14	228	0	0	330	
P.B.DS	214	3	6	1119	334	27	7	190	BLACK
NO.INF	3	0	0	0	0	0	0	0	
REGULR	18	16	1	68	0	0	1	15	

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ACADEM	1	0	0	1	0	1	0	1
1028.C	1	0	0	0	0	0	0	0
COOPB	0	2	0	0	0	0	0	4
COOPB	0	1	0	0	0	0	0	2
S.F.E.	0	0	0	0	0	0	0	0
PREV.	1	0	0	3	1	2	0	8
R.R.	0	0	0	0	0	0	3	0
HAND.	0	0	0	1	0	0	0	0
P.B.DS	0	0	0	1	0	0	0	2
A.IND.								
NO.INF	0	0	0	0	0	0	0	0
REGULR	5	0	0	20	0	2	1	4
ACADEM	0	0	0	0	0	0	0	0
1028.C	1	0	0	0	0	0	0	0
COOPB	0	0	0	0	0	0	0	0
COOPB	0	0	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	0	0	0	2	0	1	0	4
R.R.	0	0	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	1	0	0	0	0	0	0	2
ORIENT.								
NO.INF	3	0	0	2	0	0	0	0
REGULR	18	8	0	52	1	11	1	2
ACADEM	1	0	0	4	0	1	0	1
1028.C	1	0	0	1	0	0	0	2
COOPB	0	2	0	0	0	0	0	1
COOPB	0	0	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	0	0	0	5	0	0	0	8
R.R.	0	0	0	0	0	0	0	1
HAND.	0	0	0	0	0	0	0	1
P.B.DS	2	0	0	0	0	0	0	1
SP.AMER								
NO.INF	3	0	0	1	0	0	0	2
REGULR	33	3	2	67	1	5	2	18
ACADEM	0	0	0	13	0	1	1	0
1028.C	3	0	0	1	0	0	0	0
COOPB	2	9	0	0	0	0	0	1
COOPB	0	1	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	1	0	0	2	0	0	0	6
R.R.	0	0	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	1	0	0	0	0	1	0	1
OTHER								

NO OF STUDENTS BY PROGRAM BY REGULAR, DISADVANTAGED AND HANDICAPPED

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TRGIND
NO.INF	357	91	24	511	12	88	14	157
REGULR	11444	1881	409	26852	143	3327	394	5582
ACADEM	535	73	26	1563	0	224	57	116
1028.D	237	5	1	5	1	17	6	96
COOPB	5	1201	79	5	4	146	0	407
COOPB	31	173	19	10	1	30	1	176
S.F.E.	2	0	0	38	0	0	0	0
PREV.	275	77	84	260	85	176	92	1509
R.R.	4	10	1	5	0	4	0	12
HAND.	1	2	5	5	3	0	0	37

	P.B.DS	180	8	2	280	172	36	0	82
REGULR									
	NC.INF	82	19	19	259	3	29	1	97
	REGULR	2705	349	181	8209	96	1160	34	2241
	ACADEM	202	31	1	707	1	53	62	28
	1028.D	399	10	2	43	0	13	19	224
	CCCPB	5	318	5	6	0	26	0	92
	CCOPB	18	101	13	5	9	22	0	188
	S.F.E.	1	0	0	37	0	0	0	4
	PREV.	60	3	17	80	106	68	21	380
	R.R.	4	33	2	3	14	38	39	87
	HAND.	0	0	58	34	58	0	0	85
	P.B.DS	384	35	16	860	174	63	16	445
DISADV									
	NC.INF	22	1	1	62	0	1	1	17
	REGULR	549	39	4	1167	6	90	3	288
	ACADEM	46	5	0	79	0	5	41	9
	1028.D	15	1	0	1	0	1	0	9
	CCCPB	1	10	1	0	0	4	0	23
	CCOPB	1	6	1	2	1	4	0	22
	S.F.E.	0	0	0	7	0	0	0	0
	PREV.	2	0	2	6	0	0	0	23
	R.R.	1	2	0	1	0	0	0	2
	HAND.	32	43	46	101	339	0	0	858
	P.B.DS	16	0	0	69	9	1	2	30
HANDIC									

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TALLY OF USCE CODES TOTAL

USCE CODE COUNT BY MAJOR AREA

01	04	07	09	14	16	17
17346	4499	989	41656	5585	767	13096

CODE	TITLE	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
010000	AGRICULTURE	3	0	2	0	0	5	0	0
010100	AGRIC PROD	4157	222	232	0	43	4596	4	3
010101	ANIMAL SCIENCE	2395	98	210	0	12	2647	2	4
010102	PLANT SCIENCE	1088	10	128	0	0	1189	1	0
010103	FARM MECHANICS	787	4	110	1	1	847	0	3
010104	FARM BUSINESS MGT	197	2	0	0	1	211	0	5
010199	AGRIC PRODUCTION OTH	3224	54	293	16	7	3518	1	2
010200	AGRIC SUPPLIES/SERVI	135	1	40	0	0	153	0	0
010201	AGRIC CHEMICALS	1	0	0	0	0	3	0	0
010202	FEEDS	3	0	0	0	0	3	1	0
010203	SEEDS	1	0	0	0	0	1	0	0
010299	AGRIC SUPPLIES/SERVI	90	1	2	0	0	96	0	4
010300	AGRIC MECHANICS	636	2	88	0	2	684	0	0
010301	AGRIC POWER/MACHINER	245	0	46	0	0	249	0	3
010302	AGRIC STRUC/CONVENIE	21	0	0	0	0	21	0	0
010303	SOIL MANAGEMENT	75	0	0	0	0	76	0	0
010304	WATER MANAGEMENT	1	0	1	0	0	1	0	0
010305	AGRIC.MECH.SKILLS	590	1	57	0	0	605	2	0
010306	AGRIC CONSTRUC/MAINT	95	1	1	0	0	99	0	0
010307	AGRIC ELECTRIFICAT	31	0	0	0	0	36	1	0
010399	AGRIC MECHANICS OTHE	163	0	4	0	0	171	0	0
010400	AGRICULTURAL PRODUCT	77	1	1	0	0	80	0	17
010401	FOOD PRODUCTS	19	0	0	0	0	20	0	6
010402	NONFOOD PRODUCTS	1	0	0	0	0	1	0	0
010499	AGRIC PRODUCTS,OTHER	8	0	1	0	0	13	0	0
010500	ORNAMENTAL HORT	176	20	53	0	10	196	1	0
010501	ARBORICULTURE	2	0	1	0	0	2	0	0
010502	FLORICULTURE	3	9	0	0	0	12	1	0
010503	GREENHOUSE OPERATION	21	5	0	0	0	26	0	0
010504	LANDSCAPING	69	1	0	0	0	74	0	0
010505	NURSERY OPERATION	3	0	0	0	0	3	0	2
010506	TURF MANAGEMENT	1	0	0	0	0	1	0	0
010599	ORNAMENTAL HORTICUL	161	15	1	16	0	163	0	0
010600	AGRIC RESOURCES	87	1	2	0	0	93	0	0
010601	FORESTS	46	6	4	0	0	53	0	0
010602	RECREATION	13	0	5	0	0	18	0	0
010603	SOIL	29	0	1	0	0	29	0	0
010604	WILDLIFE	117	2	30	0	0	130	1	0
010605	WATER	4	0	0	0	0	3	0	0
010606	AIR	1	0	1	0	0	1	0	0
010607	FISH	13	0	0	0	0	13	0	0
010608	RANGE	2	0	0	0	0	2	0	0
010699	AGRIC RESOURCES OTHE	7	0	0	0	0	7	0	0
010700	FORESTRY	102	1	21	0	0	109	0	0
010701	FORESTS	59	1	1	0	0	64	0	0
010702	FOREST PROTECTION	3	0	0	0	0	5	0	0
010703	LOGGING	22	0	2	0	0	24	0	0
010704	WOOD UTILIZATION	1	0	0	0	0	1	0	0
010705	RECREATION	10	0	0	0	0	10	0	0
010799	FORESTRY OTHER	83	1	0	0	0	85	0	0
019900	OTHER AGRIC	672	22	15	0	1	708	0	0
040000	TOTAL DISTRIBUTION	327	260	2	0	0	609	207	19

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
040100	ADVERTISING SERV	56	48	0	0	0	108	13	1
040200	APPAREL & ACCES	64	126	3	0	0	193	95	7
040300	AUTOMOTIVE	147	8	7	0	0	167	53	11
040400	FINANCE & CREDIT	11	20	0	0	0	31	6	0
040500	FLORISTRY	8	16	0	0	0	25	11	2
040600	FOOD DISTRIBUTION	263	61	4	0	0	344	154	50
040700	FOOD SERVICES	137	167	8	0	0	323	152	20
040800	GEN MERCHANDISE	116	235	6	0	1	375	177	10
040900	HOM BLDG MATERIALS	43	16	2	0	0	62	25	4
041000	HOME FURNISHINGS	23	6	1	0	0	33	9	6
041100	HOTEL & LODGING	10	5	0	1	0	15	8	1
041200	INDUSTRIAL MARKETING	42	26	0	0	0	69	57	0
041300	INSURANCE	6	5	0	0	0	11	1	0
041400	INTERNATIONAL TRADE	1	0	0	0	0	3	0	0
041500	PERSONAL SERVICES	34	34	0	0	0	69	43	1
041600	PETROLEUM	39	1	0	0	0	41	12	13
041700	REAL ESTATE	3	3	0	0	0	7	4	0
041800	RECREATION & TOURISM	25	25	2	0	0	53	22	0
041900	TRANSPORTATION	45	9	0	0	0	54	28	1
042000	RETAIL TRADE	130	90	4	0	1	229	70	17
043100	WHOLESALE TRADE	33	12	0	0	0	48	30	0
049900	OTHER DIST	925	635	23	44	6	1603	569	115
070000	TOTAL HEALTH	17	17	1	0	0	34	2	0
070100	DENTAL	4	1	0	0	0	5	0	0
070101	DENTAL ASSISTANT	10	25	0	0	0	37	22	4
070102	DENT HYGIENISTS(ASSO	2	0	0	0	0	2	0	0
070103	DENT LAB TECH	3	0	0	0	0	3	0	0
070199	DENTAL, OTHER	5	1	0	2	0	6	0	0
070203	MED LAB ASSISTING	0	5	0	0	0	6	5	1
070300	NURSING	2	0	0	0	0	2	0	0
070301	NURSE, ASSO DEGREE	4	0	2	0	0	5	0	0
070302	PRACTICAL (VOC) NURS	14	29	1	0	0	32	0	3
070303	NURSES' ASSIST (AIDE	10	96	3	0	0	109	5	13
070304	PSYCHIATRIC AID	4	0	0	0	0	4	0	0
070399	NURSING OTHER	6	120	8	0	0	135	8	1
070400	REHABILITATION	1	0	0	0	0	1	0	0
070499	REHABILITATION, OTHE	58	23	1	82	0	84	0	0
070500	RADIOLOGIC	1	0	0	0	0	1	0	0
070501	RADIOLOGIC TECHNOLOG	0	2	0	0	0	2	1	0
070503	NUCLEAR MEDICAL TECH	1	0	0	0	0	1	0	0
070599	RADIOLOGIC, OTHER	1	0	0	0	0	1	0	0
070602	ORTHOPTICS	0	25	0	0	0	25	0	0
070603	OPTOMETRIST ASSISTAN	0	3	0	0	0	3	2	1
070700	ENVIRONMENTAL HEALTH	0	1	1	0	0	2	0	0
070799	ENVIRONMENTAL HEALTH	0	1	0	0	0	1	0	0
070900	MISC HEALTH OCCUPATI	0	1	1	0	0	1	0	0
070903	INHALATION THERAPY T	2	2	0	0	0	3	4	0
070904	MEDICAL ASSISTANT	1	28	0	0	0	30	25	3
070905	CENTRAL SUPPLY TECH	1	0	1	0	0	1	0	0
070906	HEALTH AIDE	0	2	0	0	0	2	2	0
070909	MORTUARY SCIENCE	1	0	0	0	0	1	0	1
079900	OTHER HEALTH	184	242	17	11	8	426	27	5
090100	TOTAL CONSUMER & HMK	48	2126	24	0	123	2145	6	3
090101	COMP.HOMEMAKING	478	30842	1135	65	456	32194	16	3
090102	CHILD DEVELOPMENT	2	253	0	0	1	266	0	3
090103	CLOTHING & TEXTILES	4	532	1	0	3	563	1	0
090104	CONSUMER EDUCATION	41	364	10	0	1	427	0	0
090105	FAMILY HEALTH	1	0	0	0	0	1	0	0
090106	FAMILY RELATIONS	187	719	4	0	0	941	0	0
090107	FOOD & NUTRITION	36	617	133	1	4	669	1	0

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		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
C90108	HOME MANAGEMENT	0	36	0	0	0	36	0	5
C90139	HOUSING/HOME FURNISH	16	511	3	0	3	539	2	0
C90199	OTHER C&HM	183	1668	11	45	8	1901	6	1
C90200	TOTAL OCCUP PREP	2	84	0	0	1	89	0	0
C90201	CARE & GUID OF CHILD	24	236	115	0	0	262	23	3
C90202	CLOTHING, MGT, PROD	15	84	63	0	0	103	1	1
C90203	FOOD MGT, PROD & SER	64	114	77	0	0	187	0	2
C90205	INST. & HOME MGT & S	1	2	0	0	0	3	0	3
C90299	OTHER OCC PREP	205	300	101	358	155	316	0	1
140000	TOTAL OFFICE	3	52	3	0	0	55	0	0
140100	ACCOUNTING & COMPUTI	2	112	0	0	0	118	0	0
140101	ACCOUNTANTS	0	1	0	0	0	1	0	0
140102	BOOKKEEPERS	4	19	1	0	0	23	2	1
140103	CASHIERS	1	5	1	0	0	5	2	2
140104	MACHINE OPERATORS	7	29	0	0	0	38	0	2
140105	TELLERS	10	19	0	0	1	29	5	0
140199	ACCTING/COMPUTING OP	0	3	0	0	0	3	3	0
140299	BUS,DATA PROC SYS.,	0	1	0	0	0	1	0	0
140300	FILING, OFFICE MACH	45	241	1	0	0	296	1	0
140302	FILE CLERKS	31	5	1	0	0	36	3	0
140303	GEN.OFFICE CLERKS	14	236	5	0	0	257	14	15
140399	FILING,OFFICE MACHIN	57	1317	22	0	1	1429	83	6
140400	INFO COMMUNIC OCCUP	0	1	0	0	0	1	0	0
140404	MAIL PREP/HNDLG OPRS	1	0	0	0	0	1	1	0
140405	MESSENGER & OFFICE	1	0	0	0	0	1	1	0
140406	RECPTIONIST/INFO CLK	0	1	0	0	0	1	1	0
140499	INFOR.COMM.OCC.,OTHE	1	1	0	0	0	2	0	2
140503	SHIP/RECEIVING CLKS	7	0	1	0	0	8	2	5
140504	STOCK/INVENT CLERKS	15	0	0	0	0	16	2	13
140599	MATERIAL SUPPORT OCC	1	1	0	0	0	2	0	2
140601	ED.ASSISTANTS	1	2	0	0	0	3	0	3
140700	STENO, SECY, & RELAT	6	185	0	0	0	197	0	0
140701	EXECUTIVE SECRETARY	0	1	0	0	0	1	0	0
140702	SECRETARIES	13	151	2	0	0	162	3	1
140703	STENOGRAPHERS	9	254	1	0	0	267	0	0
140799	STENO & SECRETARIAL	13	857	6	0	1	893	10	0
140800	SUPV & ADMIN MGT	0	1	0	0	0	1	0	0
140900	TYPING & RELATED OCC	31	642	5	0	8	672	47	2
140901	CLERK-TYPISTS	3	26	12	0	0	29	0	0
140902	TYPISTS	34	77	8	0	0	111	0	0
140999	TYPING/RELATED OCCUP	59	320	104	0	2	403	31	0
149900	OTHER OFFICE	36	425	1	0	0	472	39	1
160000	TOTAL TECHNICAL	126	2	14	0	0	134	0	0
160102	AGRICULTURAL TECH	6	0	0	0	0	6	0	0
160104	AUTOMOTIVE TECHNOL	39	0	0	0	0	40	0	0
160105	CHEMICAL TECHNOL	7	4	0	0	0	11	0	0
160107	ELEC TECHNOL	1	0	0	0	1	0	0	0
160108	ELECTRONICS TECHNOL	209	5	3	0	0	219	0	0
160113	MECH TECHNOL	73	2	0	0	0	76	0	0
160115	NUCLEAR TECH	1	0	0	0	0	1	0	0
160199	ENG.RELATED TECH,OTH	38	0	0	0	0	38	0	0
160201	ANIMAL SCIENCE	1	1	1	0	0	1	0	0
160299	AGRI-RELATED TECH,OT	30	0	0	0	0	30	0	0
160300	HEALTH-RELATED TECH	1	0	0	0	0	1	0	0
160303	MEDICAL LABORATORY A	1	0	0	0	0	1	0	1
160399	HEALTH-RELATED TECH,	110	17	0	0	0	127	0	0
160600	MISC TECH ED.	6	0	0	0	0	7	0	0
160602	FIRE & SAFETY TECHNO	0	2	0	0	0	2	0	0
160605	POLICE SCIENCE	30	2	0	0	0	33	0	0
160699	MISC. TECH. ED,OTHER	25	0	24	0	0	25	0	0

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
170000	TOTAL TRADES & INDUS	280	213	136	0	1	503	43	29
170100	AIR CONDITIONING	18	0	0	0	0	18	0	1
170101	COOLING	31	0	0	0	0	34	0	0
170199	AIR CONDITIONING,OTH	30	0	1	0	0	30	0	1
170200	APPLIANCE REPAIR	20	0	0	0	0	23	0	2
170201	ELECTRICAL APPLIANCE	90	1	1	0	0	98	5	3
170300	AUTOMOTIVE SERVICES	16	0	0	0	0	16	0	1
170301	BODY & FENDER	286	2	22	3	0	299	4	7
170302	MECHNICS, AUTO	1210	9	126	0	0	1300	27	24
170303	SPECIALIZATION OTHER	24	1	0	0	0	25	1	6
170399	OTHER AUTOMOTIVE	191	2	44	61	20	178	16	14
170401	AIRCRAFT MAINTENANCE	2	0	0	0	0	2	1	0
170402	AIRCRAFT OPERATIONS	0	0	0	0	0	1	1	0
170499	AVIATION OCCUPATIONS	1	0	0	0	0	2	0	1
170500	BLUEPRINT READING	3	0	0	0	0	3	0	0
170600	BUS MACH MAINT	3	0	0	0	0	3	0	2
170700	CML ART OCCUP	33	25	0	0	0	60	0	0
170701	INTERIOR DECORATING	0	1	0	0	0	1	1	0
170702	WINDOW DISPLAY	1	1	1	0	0	2	0	0
170799	COMMERICAL ART OCCUP	17	11	0	0	0	28	1	2
170801	SEAMANSHIP	1	0	0	0	0	1	0	0
170900	CML PHOTOG OCCUP	1	1	2	0	0	4	1	0
170901	PHOTOGRAPHIC LAB	2	0	0	0	0	3	1	0
170999	COMMERICAL PHOTOGRAP	16	15	0	0	0	32	2	3
171000	CONSTRUC&MAINT.TRADE	596	5	77	0	0	626	0	1
171001	CARPENTRY	627	4	76	0	54	606	6	4
171002	ELECTRICITY	152	0	0	0	0	163	3	1
171003	HEAV EQUIPMENT	9	0	0	0	0	9	0	0
171004	MASONRY	193	3	46	0	0	211	0	1
171005	PAINTING & DECORAT	13	1	3	0	0	16	2	0
171006	PLASTERING	42	0	0	0	0	44	0	0
171007	PLUMB & PIPEFITTING	21	5	3	0	0	30	1	4
171008	DRY WALL INSTALLATIO	1	0	0	0	0	1	1	0
171009	GLAZING	29	0	0	0	0	31	1	1
171010	ROOFING	16	0	0	0	0	16	0	0
171099	OTHER CONSTR & MAINT	308	0	33	64	27	302	1	5
171100	CUSTODIAL SERV	62	7	5	38	13	59	14	8
171300	DRAFTING OCCUP	489	48	0	0	0	559	7	1
171400	ELEC OCCUP	62	0	0	0	0	66	0	0
171401	INDUSTRIAL ELECTRICI	25	0	26	0	0	26	0	0
171499	ELEC OCCUP,OTHER	87	2	27	0	2	88	6	3
171500	ELECTRONIC OCCUP	25	2	0	0	0	27	0	0
171501	COMMUNICATIONS	3	1	0	0	0	4	3	0
171502	INDUSTRIAL ELECTRONI	18	0	0	0	0	18	0	0
171503	RADIO/TELEVISION	300	5	4	1	5	305	1	1
171599	ELECTRONIC OCCUP OTH	86	1	0	0	0	88	0	0
171601	DRYCLEANING	3	0	0	0	0	3	0	1
171602	LAUNDERING	3	4	0	0	0	8	3	3
171699	FABRIC MAINTAINENCE	3	0	0	0	1	2	1	2
171700	FOREMANSHIP SUPER &	9	1	1	0	0	10	8	1
171900	GRAPHICS ARTS OCCUP	72	3	54	0	0	130	2	1
171901	COMPOSITION MAKEUP T	15	6	0	0	0	23	0	1
171902	PRINTING PRESS OCCUP	17	5	0	0	0	24	2	6
171903	LITHOG/PHOTO/PLATE	20	6	0	27	0	0	0	0
171999	GRAPHIC ARTS OTHER	44	0	1	19	0	29	2	0
172002	RADIOGRAPHY	1	1	0	0	0	2	0	0
172101	INSTRUMENTS	1	0	0	0	0	1	0	1
172102	WATCHMAKING & REPAIR	1	0	0	0	0	1	1	0
172300	METALWORKING OCCUP	96	1	0	0	0	99	0	0
172301	FOUNDRY	9	0	0	0	0	11	2	0

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
172302	MACHINE SHOP	626	2	21	1	3	635	4	1
172303	MACHINE TOOL OPERATI	43	1	0	0	0	44	0	0
172304	METAL TRADES COMBINE	295	0	0	0	0	310	3	4
172305	SHEET METAL	115	2	25	0	0	121	0	0
172306	WELDING & CUTTING	246	0	23	0	1	253	3	0
172307	TOOL & DIE MAKING	0	1	0	0	0	1	0	0
172309	METAL PATTERNMAKING	1	0	0	0	0	1	0	0
172399	METALWORKING, OTHER	360	73	4	206	124	323	2	5
172600	PERSONAL SERVICES	0	4	0	0	0	4	0	0
172601	BARBERING	3	2	0	0	0	5	0	1
172602	COSMETOLOGY	3	1163	28	28	8	1204	3	0
172699	OTHER PERSONAL SERV	4	40	0	0	0	48	5	0
172700	PLASTICS OCCUP	7	0	0	0	0	9	6	1
172802	LAW ENFORCEMENT TR.	1	0	0	0	0	1	0	0
172899	PUBLIC SERV.OTHER	10	1	2	0	0	13	1	1
172900	QUANTITY FOOD OCCUPA	1	0	0	0	0	1	1	0
172901	BAKER	2	0	0	0	0	2	2	0
172902	COOK/CHEF	91	56	2	0	1	149	44	18
172903	MEAT CUTTER	9	0	0	0	0	10	5	4
172904	WAITER/WAITRESS	16	37	10	0	0	59	10	20
172995	QUANTITY FOOD OCC.,OT	48	30	3	10	5	80	10	15
173000	REFRIGERATION	42	4	0	0	0	47	0	0
173100	SMALL ENG REPAIR	6	0	0	0	0	7	4	2
173295	STAT.ENERGY SOURCES,	1	0	0	0	0	1	0	0
173300	TEXTILE PROD & FAB	0	2	0	0	0	2	1	0
173302	TAILORING	24	57	20	0	1	90	1	0
173395	TEXTILE PRODUCTION	13	2	0	0	0	16	4	8
173400	LEATHER WORKING	1	0	0	0	0	1	0	0
173402	SHOE REPAIR	55	0	16	0	1	54	2	0
173499	LEATHERWORKING OTHER	1	0	0	0	0	1	0	1
173500	UPHOLSTERING	12	4	0	0	1	15	1	3
173600	WOODWORKING OCCUP	56	12	0	0	1	68	1	28
173601	MILLWORK & CABINET	174	4	31	1	0	210	2	3
173695	WOODWORKING OTHER	308	93	4	246	98	308	14	2
179900	OTHER TRAIND	1698	373	62	225	100	2041	249	121
555555	VOC IMPROVEMENT PROG	695	228	302	35	19	923	2	9
599000	TOTAL SPECIAL PROGRA	4	3	1	2	1	7	0	0

TALLY OF STATISTICS FOR TEACHERS *
GRAND TOTALS

TYPE OF SCHOOL	NO INF	ELEM.	J.H.S.	H.SCH	PRIVAT	P.S.A.	T.INST	C.COL.	SCPSC.	OTHER
	0	0	114	1745	2	0	0	0	0	0
	0%	0%	6%	94%	0%	0%	0%	0%	0%	0%

TITLE	NO INFORMATION	TEACHER	TEACHING AIDE	GUIDANCE	LOCAL DIRECTOR	SUPERVISOR(LOCAL)	STATE STAFF	LOCAL ADMINISTRATOR	OTHER
	0	1621	59	6	16	15	0	19	6
	0%	93%	3%	0%	1%	1%	0%	1%	0%

SEX	NO.INFOR.	MALE	FEMALE
	0	878	864
	0%	50%	50%

MARITAL STATUS	NO.INFOR.	SINGLE	MARRIED
	0	270	1572
	0%	15%	85%

VETERAN		YES	NO
	0	571	1171
	0%	32%	68%

DEGREES	NO INFO	NONE	ASSOC.	BS	BS+30	MS	MS+45	ED.S.	DOCTORATE
	0	334	23	732	213	376	64	0	0
	0%	19%	1%	42%	12%	21%	3%	0%	0%

RACE	NO INFO	CAUCA.	BLACK	A.IND.	ORIENT.	SP.AMER	OTHER
	0	1497	241	0	1	1	2
	0%	86%	14%	0%	0%	0%	0%

SERVICE	NO INF	AGRIC	DISTRI	HEALTH	C&H.EC	O.H.ED	OFFICE	TECH.I	TR&IND	RELATD	ACADEM	OTHER
	9	252	126	25	476	44	158	29	523	60	36	132
	0%	14%	7%	1%	26%	2%	9%	1%	28%	3%	2%	7%

PROGRAM LEVEL	NO.INF	PRE.SC	SEC.	P.SEC.	ADULT
	37	47	1629	29	0
	2%	2%	93%	1%	0%

TYPE PROGRAM	NO.INFO	WORK.ST	REGULAR	ACADEMC	102DISA	COOP.B	S.F.EXP	PREVOCA	REL.REM	RELATED	HANDI.	P.B DIS	COOP.G
	45	16	1184	53	46	92	9	64	20	14	115	69	15
	2%	0%	67%	3%	2%	5%	0%	3%	1%	0%	6%	3%	0%

YEARS EMPLOYED IN EDUCATION	NO IN	1	2	3	4	5-10	11-20	>=21
	16	192	121	108	127	442	372	364
	0%	11%	6%	6%	7%	25%	21%	20%

YRS EXPERIENCE IN IND/BUS	NO IN	1	2	3	4	5-10	11-20	>=21
	513	128	147	142	87	290	260	175
	29%	7%	8%	8%	4%	16%	14%	10%

YRS EMPLOYED IN PRESENT PCS	NO IN	1	2	3	4	5-10	11-20	>=21
	26	398	228	170	118	373	240	189
	1%	22%	13%	9%	6%	21%	13%	10%

NO INFORMATION

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
2	0	0	0	0	0	0	0	0	0	0	0

*119 Teachers are shown in grand totals of "Type School" and "Service" that are not included in supporting data analysis./Origin: Nashville, Gibson County, Lewis County, DeKalb County.

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TEACHER

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
1415	132	14	2	10	0	33	40	2	41	14	0

TEACHING AIDE

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
52	1	0	0	0	0	3	0	0	2	1	0

GUIDANCE

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
0	1	0	5	0	0	0	0	0	0	0	0

LOCAL DIRECTOR

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
0	1	0	15	1	0	0	0	0	0	0	0

SUPERVISOR(LOCAL)

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
3	0	0	12	0	0	0	0	0	0	0	0

LOCAL ADMINISTRATOR

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
2	0	0	16	2	0	1	0	0	0	0	0

OTHER

THIS COURSE			ADMINISTRATION			ACAD.COURSES			ANOTHER V.COURSE		
FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL	FULL	PART	>FULL
3	1	0	2	0	0	0	0	0	0	0	0

AGE OF TEACHERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
9	33	55	70	61	46	46	45	60	38	34	36	30	26	40	57	28	46	58	36
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
46	40	38	41	39	38	29	49	48	52	38	41	52	36	34	32	32	22	24	26
61	62	63	64	65	66	67	68	69	70										
22	21	20	11	6	3	1	1	1	0										

TALLY OF STATISTICS FOR STUDENTS
TOTALS FOR WEST TENNESSEE REGION

TYPE OF SCHOOL	NO INF	ELEM.	J.H.S.	H.SCH	PRIVAT	P.S.A.	T.INST	C.COL.	SERSC.	OTHER
	0	0	3538	27299	34	0	0	0	0	0
	0%	0%	12%	88%	0%	0%	0%	0%	0%	0%

SEX	NO.INFOR.	MALE	FEMALE
	0	11318	19553
	0%	37%	63%

MARITAL STATUS	NO.INFOR.	SINGLE	MARRIED
	0	30347	524
	0%	99%	1%

VETERAN	YES	NO
0	716	30155
0%	2%	98%

EDUCATION	NO INFO	K-GARDEN	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8
	0	2	1	1	1	3	16	8	169	938
	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%

GRADE 9	GRADE 10	GRADE 11	GRADE 12
7222	7293	7640	7100
25%	24%	25%	23%

RACE	NO INFO	CAUCA.	BLACK	A.IND.	ORIENT.	SP.AMER	OTHER
	1506	16973	13726	59	20	29	64
	3%	55%	45%	0%	0%	0%	0%

BENEFITS EXPECTED	NONE	G.I.BILL	V.A.DISB	VOC.REHA	SOC.SEC.	WK STUDY	OTHER
	24200	69	253	853	2016	870	3005
	78%	0%	0%	2%	6%	2%	9%

PRIOR TRAINING	NONE	DISTRI	AGRIC	HEALTH	HOME.EC	OC.H.EC.	OFF.OCC.	TRAD&IND	TECH I.
	8601	1700	4041	2689	14095	534	2443	2888	387
	27%	5%	13%	8%	45%	1%	7%	9%	1%

PLANS ADVANCED TRAINING	NO INFO	NONE	HIGH SCH	A.VOC.SC	TECH IN.	COM COLL	PRI.V.S.	4-YR COL	OTHER
	2029	5128	15964	2521	597	522	222	2346	1542
	6%	16%	51%	8%	1%	1%	0%	7%	4%

CLASSIFICATION	P.SEC.	A.PREP	A.SUP.	APPREN
	0	0	0	0
	0%	0%	0%	0%

REGULAR	DISADVANTAGED	HANDICAPPED
19625	9848	1833
63%	31%	5%

AVERAGE EDUCATION OF PUPILS NOT INCLUDING UNGRADED 10.37 NO OF STUDENTS 30489

AGE OF STUDENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	0	0	0	0	0	25	3	10	512	5007	6106	7471	7121	2046	515

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
104	44	11	0	7	1	7	3	2	0	1	5	0	0	2	1	2	1	1	0

2542

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
1	3	1	3	1	2	0	2	0	1	0	2	1	0	1	0	2	0	0	0

61	62	63	64	65	66	67	68	69	70
2	1	0	0	1	3	1	2	0	1

NO OF STUDENTS BY PROGRAM

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
4482	1681	357	14634	836	2504	273	5061

REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
21837	860	266	1210	168	180	1702	572	1036	2539

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	64	20	21	251	0	39	1	81
REGULR	3836	583	243	12518	76	1970	51	2507
ACADEM	64	77	0	495	0	29	123	50
1028.D	46	1	0	27	1	25	1	160
COOPB	3	864	51	7	3	139	0	142
COOPB	11	87	4	1	6	8	0	50
S.F.E.	2	0	0	80	0	0	0	4
PREV.	61	23	35	37	105	186	42	1204
R.R.	5	7	0	2	14	15	39	8
HAND.	22	1	1	18	283	0	0	703
P.B.DS	368	18	2	1198	348	93	16	152

NO OF STUDENTS BY PROGRAM BY SEX

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
4104	920	43	413	267	179	252	3948

REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
6270	287	143	623	131	99	1274	404	666	857 M

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
158	707	310	13701	555	2269	10	840

REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
14835	545	51	548	37	80	356	162	358	1559 F

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	35	12	0	33	0	6	0	28
REGULR	3539	261	34	333	8	117	41	1906
ACADEM	53	57	0	3	0	1	117	47
1028.D	45	1	0	0	1	1	0	92
COOPB	3	484	2	2	0	6	0	125
COOPB	11	70	1	1	2	7	0	38
S.F.E.	1	0	0	0	0	0	0	4
PREV.	60	22	3	5	33	30	39	1078
R.R.	4	4	0	0	0	0	39	8
HAND.	18	1	1	0	154	0	0	489
P.B.DS	335	8	2	36	69	11	16	133

M

NO.INF	2	7	20	180	0	31	1	31
REGULR	130	302	207	11793	66	1814	8	495
ACADEM	1	20	0	481	0	27	0	3
1028.D	1	0	0	24	0	19	1	4
COOPB	0	349	48	5	3	128	0	15
COOPB	0	17	3	0	4	1	0	12
S.F.E.	1	0	0	79	0	0	0	0
PREV.	1	1	32	31	72	152	0	65
R.R.	1	3	0	2	14	15	0	0
HAND.	4	0	0	18	123	0	0	208
P.B.DS	17	8	0	1088	273	82	0	7

F

NO OF STUDENTS BY PROGRAM BY RACE

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
3046	1114	160	7311	150	1436	154	2499			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
12341	587	38	727	112	109	1035	269	473	404	CAUCA.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
1166	494	193	6731	670	995	105	2245			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
8636	243	154	438	53	69	570	290	548	2004	BLACK
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.EC	OFFICE	TECH.I	TR&IND			
9	7	0	20	1	3	3	13			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
36	1	0	1	3	0	9	4	1	3	A.IND.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.EC	OFFICE	TECH.I	TR&IND			
2	0	0	8	0	3	0	6			
REGULR	ACADEM	1028.C	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
14	0	0	0	0	0	5	1	0	0	ORIENT.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
6	8	0	6	0	4	0	3			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
21	0	1	2	0	0	3	0	0	2	SP.AMER
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
10	5	0	29	0	4	0	14			
REGULR	ACADEM	1028.D	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
45	1	1	5	0	0	6	1	0	3	OTHER

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND	
AC.INF	20	17	16	86	0	31	1	36	
REGULR	2768	420	66	6817	55	1090	42	1061	
ACADEM	50	69	0	341	0	21	69	33	
1028.C	9	0	0	0	0	19	1	6	
CCOPB	0	517	39	1	3	85	0	82	
COOPB	11	46	4	0	2	6	0	42	
S.F.E.	1	0	0	46	0	0	0	0	
PREV.	39	22	34	5	0	106	14	813	
R.R.	3	7	0	1	9	13	18	4	
HAND.	3	1	0	7	72	0	0	386	
P.B.DS	142	15	1	7	9	65	9	36	CAUCA.
AC.INF	14	2	4	125	0	6	0	22	
REGULR	879	131	175	5246	19	829	7	1322	
ACADEM	4	8	0	142	0	6	48	17	
1028.C	37	1	0	22	1	1	0	90	
CCOPB	2	310	11	6	0	50	0	58	
COOPB	0	40	0	1	4	2	0	6	
S.F.E.	1	0	0	33	0	0	0	3	
PREV.	21	1	1	31	103	73	25	311	
R.R.	2	0	0	1	5	1	18	4	
HAND.	19	0	1	10	205	0	0	309	
P.B.DS	207	1	1	1114	333	27	7	103	BLACK
AC.INF	1	0	0	0	0	0	0	0	
REGULR	8	5	0	18	0	0	0	5	
ACADEM	0	0	0	0	0	1	0	0	
1028.C	0	0	0	0	0	0	0	0	
CCOPB	0	1	0	0	0	0	0	0	
COOPB	0	1	0	0	0	0	0	2	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	0	0	0	0	1	2	0	6	
R.R.	0	0	0	0	0	0	3	0	

2914

HAND.	0	0	0	1	0	0	0	0
P.B.DS	0	0	0	1	0	0	0	0
NO.INF	0	0	0	0	0	0	0	0
REGULR	2	0	0	8	0	2	0	2
ACADEM	0	0	0	0	0	0	0	0
1028.D	0	0	0	0	0	0	0	0
CCOPB	0	0	0	0	0	0	0	0
CCOPB	0	0	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	0	0	0	0	0	1	0	4
R.R.	0	0	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	0	0	0	0	0	0	0	0
NO.INF	0	0	0	0	0	0	0	0
REGULR	5	6	0	5	0	4	0	0
ACADEM	0	0	0	0	0	0	0	0
1028.D	0	0	0	1	0	0	0	0
CCOPB	0	2	0	0	0	0	0	0
CCOPB	0	0	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	0	0	0	0	0	0	0	3
R.R.	0	0	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	1	0	0	0	0	0	0	0
NO.INF	1	0	0	1	0	0	0	0
REGULR	6	1	0	26	0	3	0	9
ACADEM	0	0	0	1	0	0	0	0
1028.D	0	0	0	1	0	0	0	0
CCOPB	1	4	0	0	0	0	0	0
CCOPB	0	0	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	1	0	0	0	0	0	0	5
R.R.	0	0	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	1	0	0	0	0	1	0	0

A.IND.

ORIENT.

SP.AMER

OTHER

NO OF STUDENTS BY PROGRAM BY REGULAR, DISADVANTAGED AND HANDICAPPED

	AGRIC.	DISTRI	HEALTH	CEH.ED	O.H.ED	OFFICE	TECH.I	TRAIND
NO.INF	44	16	20	139	0	30	0	56
REGULR	3118	468	83	8652	45	1443	46	1635
ACADEM	45	54	0	360	0	28	54	42
1028.D	9	1	0	2	1	11	1	68
CCOPB	1	628	49	2	3	109	0	98
CCOPB	3	59	2	1	1	4	0	19
S.F.E.	2	0	0	37	0	0	0	0
PREV.	33	23	34	6	0	122	42	979
R.R.	1	6	0	1	0	1	0	3
HAND.	0	1	0	1	1	0	0	33
P.B.DS	122	6	1	277	171	34	0	42
NO.INF	17	4	1	104	0	8	0	23
REGULR	678	113	160	3719	31	505	4	847
ACADEM	19	22	0	132	0	1	62	8
1028.D	37	0	0	25	0	13	0	92
CCOPB	2	231	2	5	0	26	0	25

REGULR

CCCPB	8	27	2	0	5	4	0	26	
S.F.E.	0	0	0	37	0	0	0	4	
PREV.	28	0	1	31	105	64	0	220	
R.R.	3	1	0	1	14	14	39	4	
HAND.	0	0	0	1	1	0	0	2	
P.B.DS	238	12	1	856	174	59	16	105	DISADV
NC.INF	3	0	0	27	0	1	1	2	
REGULR	73	4	1	375	1	34	1	63	
ACADEM	0	4	0	15	0	0	41	0	
102B.C	0	0	0	1	0	1	0	0	
CCCPB	0	5	0	0	0	4	0	19	
CCCPB	0	3	0	0	1	0	0	6	
S.F.E.	0	0	0	7	0	0	0	0	
PREV.	0	0	0	2	0	0	0	10	
R.R.	1	0	0	0	0	0	0	1	
HANC.	22	0	1	16	281	0	0	668	
P.B.DS	12	0	0	69	9	0	2	9	HANDIC

9492 2436

TALLY OF USCE CODES BY REGION 1

USCE CODE COUNT BY MAJOR AREA

C1	C4	07	09	14	16	17
4482	1681	357	15470	2504	273	5061

CODE	TITLE	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
C10100	AGRIC PROD	677	103	80	0	9	790	1	3
C10101	ANIMAL SCIENCE	1089	6	98	0	0	1140	1	2
C10102	PLANT SCIENCE	742	5	83	0	0	799	0	0
C10103	FARM MECHANICS	303	1	78	1	0	325	0	0
C10104	FARM BUSINESS MGT	61	2	0	0	1	64	0	2
C10199	AGRIC PRODUCTION OTH	811	23	71	5	2	874	0	0
C10200	AGRIC SUPPLIES/SERVI	2	0	0	0	0	4	0	0
C10201	AGRIC CHEMICALS	0	0	0	0	0	2	0	0
C10299	AGRIC SUPPLIES/SERVI	3	0	0	0	0	3	0	0
C10300	AGRIC MECHANICS	62	1	2	0	0	79	0	0
C10301	AGRIC POWER/MACHINER	68	0	0	0	0	71	0	3
C10302	AGRIC STRUC/CONVENIE	17	0	0	0	0	17	0	0
C10303	SOIL MANAGEMENT	30	0	0	0	0	30	0	0
C10305	AGRIC.MECH.SKILLS	59	0	0	0	0	61	0	0
C10399	AGRIC MECHANICS OTHE	17	0	0	0	0	17	0	0
C10400	AGRICULTURAL PRODUCT	1	0	0	0	0	1	0	0
C10401	FOOD PRODUCTS	4	0	0	0	0	4	0	1
C10500	ORNAMENTAL HORT	60	7	35	0	9	58	1	0
C10501	ARBORICULTURE	1	0	1	0	0	1	0	0
C10503	GREENHOUSE OPERATION	5	0	0	0	0	5	0	0
C10504	LANDSCAPING	11	0	0	0	0	11	0	0
C10599	ORNAMENTAL HORTICUL	39	0	1	16	0	23	0	0
C10600	AGRIC RESOURCES	8	0	0	0	0	8	0	0
C10601	FORESTS	15	0	0	0	0	16	0	0
C10604	WILDLIFE	3	1	0	0	0	4	0	0
C10700	FORESTRY	5	1	0	0	0	6	0	0
C10703	LOGGING	1	0	0	0	0	1	0	0
C10705	RECREATION	4	0	0	0	0	4	0	0
C19900	OTHER AGRIC	5	7	1	0	1	13	0	0
C40000	TOTAL DISTRIBUTION	140	89	1	0	0	232	132	0
C40100	ADVERTISING SERV	29	13	0	0	0	42	9	0
C40200	APPAREL & ACCES	33	68	0	0	0	103	69	3
C40300	AUTOMOTIVE	46	1	0	0	0	48	38	1
C40400	FINANCE & CREDIT	9	13	0	0	0	22	3	0
C40500	FLORISTRY	1	6	0	0	0	8	5	0
C40600	FOOD DISTRIBUTION	111	18	0	0	0	135	78	25
C40700	FOOD SERVICES	59	69	0	0	0	132	91	7
C40800	GEN MERCHANDISE	61	125	0	0	1	191	122	0
C40900	HDW BLDG MATERIALS	22	10	0	0	0	32	17	3
C41000	HOME FURNISHINGS	10	4	0	0	0	14	6	3
C41100	HOTEL & LODGING	5	1	0	1	0	6	6	0
C41200	INDUSTRIAL MARKETING	4	4	0	0	0	8	1	0
C41300	INSURANCE	1	2	0	0	0	3	1	0
C41400	INTERNATIONAL TRADE	0	0	0	0	0	2	0	0
C41500	PERSONAL SERVICES	12	10	0	0	0	23	15	0
C41600	PETROLEUM	10	1	0	0	0	11	3	6
C41700	REAL ESTATE	1	0	0	0	0	1	1	0
C41800	RECREATION & TOURISM	13	5	0	0	0	19	11	0
C41900	TRANSPORTATION	14	7	0	0	0	21	10	0
C42000	RETAIL TRADE	27	24	0	0	0	55	33	3
C43100	WHOLESALE TRADE	25	7	0	0	0	34	25	0
C49900	OTHER DIST	287	228	22	0	1	532	335	36

	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
C70C0C TOTAL HEALTH	13	14	0	0	0	27	0	0
C7010C DENTAL	2	0	0	0	0	2	0	0
C70101 DENTAL ASSISTANT	1	9	0	0	0	11	10	0
C70102 DENT HYGIENISTS(ASSO	1	0	0	0	0	1	0	0
C70103 DENT LAB TECH	1	0	0	0	0	1	0	0
C7C199 DENTAL, OTHER	3	0	0	1	0	3	0	0
C70203 MED LAB ASSISTING	0	1	0	0	0	1	1	0
C70301 NURSE, ASSO DEGREE	2	0	0	0	0	2	0	0
C70302 PRACTICAL (VOC) NURS	4	17	1	0	0	21	0	0
C70303 NURSES' ASSIST (AIDE	0	28	0	0	0	28	1	0
C70304 PSYCHIATRIC AID	4	0	0	0	0	4	0	0
070399 NURSING OTHER	1	91	0	0	0	92	6	0
C7C495 REHABILITATION, OTHE	1	0	1	0	0	1	0	0
C70500 RADIOLOGIC	1	0	0	0	0	1	0	0
C70603 OPTOMETRIST ASSISTAN	0	3	0	0	0	3	2	1
C7C795 ENVIRONMENTAL HEALTH	0	1	0	0	0	1	0	0
C70903 INHALATION THERAPY T	1	0	0	0	0	1	1	0
C7C904 MEDICAL ASSISTANT	1	27	0	0	0	29	24	3
C7C906 HEALTH AIDE	0	2	0	0	0	2	2	0
C799CC OTHER HEALTH	7	117	0	0	0	125	22	0
C90100 TOTAL CONSUMER & HMK	5	476	21	0	30	476	1	0
C90101 CONP.HOMEMAKING	270	12044	1073	1	378	12361	5	1
C90102 CHILD DEVELOPMENT	2	53	0	0	0	55	0	0
C90103 CLOTHING & TEXTILES	0	262	0	0	2	265	0	0
C90104 CONSUMER EDUCATION	4	48	10	0	0	55	0	0
C90106 FAMILY RELATIONS	87	184	0	0	0	276	0	0
C90107 FOOD & NUTRITION	9	191	129	0	4	201	0	0
C90108 HOME MANAGEMENT	0	31	0	0	0	31	0	0
C90109 HOUSING/HOME FURNISH	10	55	3	0	1	65	1	0
C9C199 OTHER C&HM	26	357	11	17	5	386	0	0
C90200 TOTAL OCCUP PREP	0	1	0	0	0	1	0	0
090201 CARE & GUID OF CHILD	20	138	115	0	0	160	22	0
C90202 CLOTHING, MGT, PROD	15	83	63	0	0	99	0	1
090203 FOOD MGT, PROD & SER	50	81	77	0	0	135	0	1
C90205 INST. & HOME MGT & S	1	2	0	0	0	3	0	3
C90299 OTHER OCC PREP	181	248	100	283	113	275	0	1
140000 TOTAL OFFICE	2	22	3	0	0	24	0	0
140102 BOOKKEEPERS	1	2	0	0	0	3	2	0
140105 TELLERS	10	19	0	0	1	29	5	0
140195 ACCTING/COMPUTING OP	0	3	0	0	0	3	3	0
140295 BUS DATA PROC SYS..	0	1	0	0	0	1	0	0
140300 FILING, OFFICE MACH	14	43	1	0	0	63	0	0
140302 FILE CLERKS	30	5	1	0	0	35	3	0
140303 GEN.OFFICE CLERKS	0	42	0	0	0	43	10	1
140395 FILING,OFFICE MACHIN	29	479	20	0	0	509	70	0
140400 INFO COMMUNIC OCCUP	0	1	0	0	0	1	0	0
140503 SHIP/RECEIVING CLKS	1	0	0	0	0	1	0	1
140504 STOCK/INVENT CLERKS	3	0	0	0	0	4	0	3
14C700 STENO, SECY, & RELAT	3	153	0	0	0	161	0	0
14C703 STENOGRAPHERS	1	28	1	0	0	29	0	0
14C795 STENO & SECRETARIAL	8	366	6	0	0	375	10	0
14C8CC SUPV & ADMIN MGT	0	1	0	0	0	1	0	0
140900 TYPING & RELATED OCC	30	628	5	0	8	655	46	2
140901 CLERK-TYPISTS	3	9	12	0	0	12	0	0
14C902 TYPISTS	8	26	8	0	0	35	0	0
140999 TYPING/RELATED OCCUP	14	172	104	0	2	186	30	0
1499C0 OTHER OFFICE	22	269	1	0	0	296	33	1
160000 TOTAL TECHNICAL	126	2	14	0	0	133	0	0
160104 AUTOMOTIVE TECHNOL	33	0	0	0	0	34	0	0
160105 CHEMICAL TECHNOL	7	4	0	0	0	11	0	0

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		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
160108	ELECTRONICS TECHNOL	42	2	3	0	0	48	0	0
160199	ENG.RELATED TECH,OTH	38	0	0	0	0	38	0	0
160201	ANIMAL SCIENCE	0	1	1	0	0	0	0	0
160600	MISC TECH ED.	6	0	0	0	0	7	0	0
160602	FIRE & SAFETY TECHNO	0	1	0	0	0	1	0	0
170000	TOTAL TRADES & INDUS	5	0	1	0	0	5	0	0
170100	AIR CONDITIONING	16	0	0	0	0	16	0	0
170101	COOLING	1	0	0	0	0	0	0	0
170199	AIR CONDITIONING,OTH	2	0	0	0	0	2	0	1
170200	APPLIANCE REPAIR	18	0	0	0	0	21	0	2
170201	ELECTRICAL APPLIANCE	44	0	1	0	0	47	0	0
170300	AUTOMOTIVE SERVICES	1	0	0	0	0	1	0	0
170301	BODY & FENDER	116	1	1	0	0	120	1	0
170302	MECHANICS, AUTO	485	2	56	0	0	526	9	7
170303	SPECIALIZATION OTHER	3	0	0	0	0	3	1	1
170399	OTHER AUTOMOTIVE	61	0	0	43	11	36	9	3
170401	AIRCRAFT MAINTENANCE	1	0	0	0	0	1	0	0
170499	AVIATION OCCUPATIONS	0	0	0	0	0	1	0	0
170600	BUS MACH MAINT	1	0	0	0	0	1	0	0
170799	COMMERICAL ART OCCUP	15	10	0	0	0	25	0	0
170801	SEAMANSHIP	1	0	0	0	0	1	0	0
170900	CML PHOTOG OCCUP	0	0	1	0	0	1	0	0
171000	CONSTRUC&MAINT.TRADE	313	3	74	0	0	326	0	0
171001	CARPENTRY	185	1	0	0	54	136	4	0
171002	ELECTRICITY	40	0	0	0	0	40	1	0
171004	MASONRY	50	1	0	0	0	53	0	1
171005	PAINTING & DECORAT	4	0	0	0	0	4	2	0
171006	PLASTERING	42	0	0	0	0	43	0	0
171007	PLUMB & PIPEFITTING	3	2	0	0	0	5	0	1
171099	OTHER CONSTR & MAINT	120	0	30	48	26	101	0	1
171100	CUSTODIAL SERV	22	5	0	24	6	21	0	2
171300	DRAFTING OCCUP	87	14	0	0	0	98	2	1
171400	ELEC OCCUP	21	0	0	0	0	24	0	0
171499	ELEC OCCUP,OTHER	45	1	26	0	2	44	3	1
171500	ELECTRONIC OCCUP	15	2	0	0	0	17	0	0
171501	COMMUNICATIONS	1	0	0	0	0	1	0	0
171503	RADIO/TELEVISION	143	2	0	0	0	148	0	1
171599	ELECTRONIC OCCUP OTH	33	1	0	0	0	34	0	0
171602	LAUNDERING	0	1	0	0	0	1	0	0
171699	FABRIC MAINTAINENCE	1	0	0	0	0	1	1	0
171900	GRAPHICS ARTS OCCUP	68	3	54	0	0	126	0	0
171901	COMPOSITION MAKEUP T	0	1	0	0	0	1	0	1
171902	PRINTING PRESS OCCUP	1	0	0	0	0	1	0	1
171999	GRAPHIC ARTS OTHER	26	0	0	19	0	11	0	0
172002	RADIOGRAPHY	1	1	0	0	0	2	0	0
172101	INSTRUMENTS	1	0	0	0	0	1	0	1
172300	METALWORKING OCCUP	18	0	0	0	0	19	0	0
172302	MACHINE SHOP	234	1	0	0	0	236	0	0
172303	MACHINE TOOL OPERATI	23	0	0	0	0	23	0	0
172304	METAL TRADES COMBINE	109	0	0	0	0	115	0	0
172306	WELDING & CUTTING	76	0	0	0	0	77	2	0
172399	METALWORKING, OTHER	323	73	4	206	124	284	0	5
172600	PERSONAL SERVICES	0	3	0	0	0	3	0	0
172601	BARBERING	2	2	0	0	0	4	0	0
172602	COSMETOLOGY	3	530	1	15	8	554	1	0
172699	OTHER PERSONAL SERV	1	0	0	0	0	2	2	0
172700	PLASTICS OCCUP	1	0	0	0	0	1	1	0
172802	LAW ENFORCEMENT TR.	1	0	0	0	0	1	0	0
172899	PUBLIC SERV.OTHER	0	1	0	0	0	1	1	0
172901	BAKER	1	0	0	0	0	1	1	0

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
172902	COOK/CHEF	39	17	0	0	0	58	25	2
172903	MEAT CUTTER	1	0	0	0	0	1	0	1
172904	WAITER/WAITRESS	4	11	0	0	0	16	6	6
172999	QUANTITY FOOD OCC,OT	14	3	0	8	3	15	6	1
173000	REFRIGERATION	0	1	0	0	0	1	0	0
173302	TAILORING	14	10	20	0	1	24	0	0
173399	TEXTILE PRODUCTION	2	0	0	0	0	2	1	1
173402	SHOE REPAIR	42	0	16	0	1	40	1	0
173500	UPHOLSTERING	9	4	0	0	1	12	0	1
173600	WOODWORKING OCCUP	38	0	0	0	0	37	0	2
173601	MILLWORK & CABINET	7	0	0	0	0	8	1	2
173699	WOODWORKING OTHER	299	92	4	246	98	295	3	0
179900	OTHER TRGIND	695	41	32	119	64	704	58	4
555555	VOC IMPROVEMENT PROG	140	29	40	0	2	172	0	1
990000	TOTAL SPECIAL PROGRA	1	1	1	0	0	2	0	0

TALLY OF STATISTICS FOR STUDENTS
TOTALS FOR MIDDLE TENNESSEE REGION

TYPE OF SCHOOL	NO INF	ELEM.	J.H.S.	H.SCH	PRIVAT	P.S.A.	T.INST	C.COL.	SEPSC.	OTHER
	0	0	2177	21880	21	0	0	0	0	0
	0%	0%	9%	91%	0%	0%	0%	0%	0%	0%

SEX	NO.INFOR.	MALE	FEMALE
	0	10109	13969
	0%	42%	58%

MARITAL STATUS	NO.INFOR.	SINGLE	MARRIED
	0	23519	559
	0%	98%	2%

VETERAN		YES	NO
	0	527	23551
	0%	2%	98%

EDUCATION	NO INFO	K-GARDEN	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8
	0	0	3	2	4	4	0	0	16	147
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

GRADE 9	GRADE 10	GRADE 11	GRADE 12
6635	5941	5604	5735
28%	25%	23%	24%

RACE	NO INFO	CAUCA.	BLACK	A.IND.	ORIENT.	SP.AMER	OTHER
	0	21082	2820	48	10	48	70
	0%	88%	12%	0%	0%	0%	0%

BENEFITS EXPECTED	NONE	G.I.BILL	V.A.DISA	VOC.REHA	SOC.SEC.	WK STUDY	OTHER
	20471	61	214	38	1676	537	1366
	85%	0%	0%	0%	6%	2%	5%

PRIOR TRAINING	NONE	DISTRI	AGRIC	HEALTH	HOME.EC	OC.H.EC.	OFF.OCC.	TRADEIND	TECH I.
	4731	1118	6110	1830	10755	177	1581	2390	240
	19%	4%	25%	7%	44%	0%	6%	9%	0%

PLANS ADVANCED TRAINING	NO INFO	NONE	HIGH SCH	A.VOC.SC	TECH IN.	COM COLL	PRI.V.S.	4-YR COL	OTHER
	1624	4430	13407	1257	308	519	99	1665	769
	6%	18%	55%	5%	1%	2%	0%	6%	3%

CLASSIFICATION	P.SEC.	A.PREP	A.SUP.	APPREN
	0	0	0	0
	0%	0%	0%	0%

REGULAR	DISADVANTAGED	HANDICAPPED
19095	4533	759
79%	18%	3%

AVERAGE EDUCATION OF PUPILS NOT INCLUDING UNGRADED 10.41 NO OF STUDENTS 23962

AGE OF STUDENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	0	0	0	0	0	19	4	18	139	4421	5164	5412	5548	1325	320

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
49	36	0	1	3	3	4	2	1	0	1	0	1	1	1	2	1	1	2	1

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	1	1	0	0	1	0	0	1	2	0	0	1	0	0	0	0	0	0	0

61	62	63	64	65	66	67	68	69	70
1	0	0	0	3	2	3	0	0	1

NO OF STUDENTS BY PROGRAM

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND		
6620	579	234	11684	104	1621	197	2251		
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
20317	1059	213	539	465	0	851	184	3	66

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	95	13	4	187	2	14	3	40
REGULR	5918	474	151	10643	96	1429	121	1456
ACADEM	251	2	26	687	1	41	3	44
1028.D	87	14	3	19	0	4	0	14
CCCPB	2	301	11	2	1	28	0	193
COOPB	32	137	22	7	4	29	0	207
S.F.E.	0	0	0	0	0	0	0	0
PREV.	200	2	14	129	0	49	70	276
R.R.	2	36	1	5	0	27	0	1
HAND.	1	0	0	1	0	0	0	0
P.B.DS	32	0	2	4	0	0	0	20

NO OF STUDENTS BY PROGRAM BY SEX

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
6190	607	135	227	15	146	191	1841			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
7498	329	158	387	333	0	618	103	1	59	M
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
100	225	52	10490	83	1399	5	300			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
11970	631	19	136	132	0	202	63	2	5	F

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	75	2	3	14	0	4	3	20
REGULR	5550	260	85	188	15	93	117	1171
ACADEM	228	1	25	9	0	18	3	42
1028.D	80	0	0	10	0	0	0	6
CCCPB	1	223	4	0	0	8	0	150
COOPB	32	90	2	1	0	19	0	168
S.F.E.	0	0	0	0	0	0	0	0
PREV.	192	1	14	1	0	2	68	264
R.R.	2	30	1	2	0	2	0	1
HAND.	1	0	0	0	0	0	0	0
P.B.DS	29	0	1	2	0	0	0	19
NO.INF	3	1	1	104	1	9	0	2
REGULR	86	203	63	10041	76	1272	3	220
ACADEM	2	1	1	600	1	23	0	2
1028.D	2	0	0	9	0	1	0	2
CCOPB	1	71	7	2	1	20	0	34
CCCPB	0	47	20	6	4	10	0	39
S.F.E.	0	0	0	0	0	0	0	0
PREV.	3	1	0	123	0	45	2	1
R.R.	0	1	0	2	0	19	0	0
HAND.	0	0	0	1	0	0	0	0
P.B.DS	3	0	0	2	0	0	0	0

NO OF STUDENTS BY PROGRAM BY RACE

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
5784	809	199	9501	49	1417	181	1799			
REGULR	ACADEM	1028.0	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
17052	857	159	443	416	0	733	123	3	40	CAUCA.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
455	110	28	1518	47	120	10	324			
REGULR	ACADEM	1028.0	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
2263	93	15	73	47	0	76	42	0	22	BLACK
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
7	3	0	29	0	0	0	9			
REGULR	ACADEM	1028.0	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
34	1	1	4	0	0	6	0	0	0	A.IND.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
2	0	0	6	0	0	1	1			
REGULR	ACADEM	1028.0	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
7	0	0	0	0	0	2	0	0	1	ORIENT.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
9	2	0	28	1	5	1	2			
REGULR	ACADEM	1028.0	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
40	3	0	0	0	0	2	0	0	1	SP.AMER
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
27	6	0	27	1	2	3	4			
REGULR	ACADEM	1028.0	CCOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
57	8	1	3	1	0	1	0	0	0	OTHER

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND	
AD.INF	67	1	2	96	0	10	3	16	
REGULR	5201	389	126	8728	47	1250	110	1182	
ACADEM	205	2	26	544	0	41	2	35	
1028.0	75	0	0	16	0	0	0	5	
CCOPB	2	269	11	1	1	25	0	133	
COOPB	32	118	19	1	1	27	0	191	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	173	2	14	109	0	45	66	231	
R.R.	2	28	1	3	0	19	0	0	
HAND.	1	0	0	1	0	0	0	0	
P.B.DS	26	0	0	2	0	0	0	6	CAUCA.
AD.INF	5	2	2	19	1	3	0	6	
REGULR	395	66	22	1420	42	108	6	200	
ACADEM	25	0	0	56	1	0	0	9	
1028.0	5	0	0	3	0	0	0	3	
CCOPB	0	22	0	1	0	3	0	47	
COOPB	0	17	3	6	3	2	0	16	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	21	0	0	10	0	2	4	29	
R.R.	0	3	0	1	0	2	0	1	
HAND.	0	0	0	0	0	0	0	0	
P.B.DS	4	0	1	2	0	0	0	13	BLACK
AD.INF	2	0	0	0	0	0	0	0	
REGULR	3	3	0	25	0	0	0	3	
ACADEM	0	0	0	1	0	0	0	0	
1028.0	1	0	0	0	0	0	0	0	
CCOPB	0	0	0	0	0	0	0	4	
COOPB	0	0	0	0	0	0	0	0	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	1	0	0	3	0	0	0	2	
R.R.	0	0	0	0	0	0	0	0	

HAND.	0	0	0	0	0	0	0	0	
P.B.DS	0	0	0	0	0	0	0	0	A.IND.
AC.INF	0	0	0	0	0	0	0	0	
REGULR	1	0	0	4	0	0	1	1	
ACADEM	0	0	0	0	0	0	0	0	
1028.D	0	0	0	0	0	0	0	0	
COOPB	0	0	0	0	0	0	0	0	
CCOPB	0	0	0	0	0	0	0	0	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	0	0	0	2	0	0	0	0	
R.R.	0	0	0	0	0	0	0	0	
HAND.	0	0	0	0	0	0	0	0	
P.B.DS	1	0	0	0	0	0	0	0	ORIENT.
AC.INF	1	0	0	1	0	0	0	0	
REGULR	7	2	0	24	1	5	1	0	
ACADEM	0	0	0	3	0	0	0	0	
1028.D	0	0	0	0	0	0	0	0	
COOPB	0	0	0	0	0	0	0	0	
CCOPB	0	0	0	0	0	0	0	0	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	0	0	0	0	0	0	0	2	
R.R.	0	0	0	0	0	0	0	0	
HAND.	0	0	0	0	0	0	0	0	
P.B.DS	1	0	0	0	0	0	0	0	SP.AMER
AC.INF	1	0	0	0	0	0	0	0	
REGULR	25	2	0	22	1	2	2	3	
ACADEM	0	0	0	5	0	0	1	0	
1028.D	1	0	0	0	0	0	0	0	
COOPB	0	3	0	0	0	0	0	0	
CCOPB	0	1	0	0	0	0	0	0	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	0	0	0	0	0	0	0	1	
R.R.	0	0	0	0	0	0	0	0	
HAND.	0	0	0	0	0	0	0	0	
P.B.DS	0	0	0	0	0	0	0	0	OTHER

NO OF STUDENTS BY PROGRAM BY REGULAR, DISADVANTAGED AND HANDICAPPED

	AGRIC.	DISTRI	HEALTH	CEH.ED	O.H.ED	OFFICE	TECH.I	TRGIND	
AC.INF	73	9	3	124	1	12	2	27	
REGULR	4933	392	138	8450	61	1141	112	1192	
ACADEM	234	2	26	513	0	29	3	40	
1028.D	59	4	1	1	0	4	0	2	
COOPB	1	272	10	1	1	28	0	167	
CCOPB	23	73	12	2	0	10	0	76	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	170	2	11	96	0	46	49	196	
R.R.	2	4	1	3	0	3	0	0	
HAND.	0	0	0	0	0	0	0	0	
P.B.DS	7	0	0	3	0	0	0	1	REGULR
AC.INF	18	4	0	55	1	2	1	12	
REGULR	831	79	13	2034	30	267	9	226	
ACADEM	10	0	0	156	1	12	0	3	
1028.D	28	10	2	18	0	0	0	12	
COOPB	1	27	1	1	0	0	0	26	

CCCPB	9	62	10	5	4	16	0	124
S.F.E.	0	0	0	0	0	0	0	0
PREV.	29	0	3	29	0	3	21	78
R.R.	0	32	0	2	0	24	0	1
HAND.	0	0	0	1	0	0	0	0
P.B.DS	25	0	2	1	0	0	0	19
NO.INF	7	0	1	13	0	0	0	3
REGULR	222	9	0	324	5	40	0	46
ACADEM	8	0	0	30	0	0	0	1
102B.C	2	1	0	0	0	0	0	1
CCOPB	1	3	0	0	0	0	0	0
CCOPB	1	2	1	2	0	4	0	11
S.F.E.	0	0	0	0	0	0	0	0
PREV.	1	0	0	4	0	0	0	2
R.R.	1	2	0	1	0	0	0	0
HAND.	1	0	0	0	0	0	0	0
P.B.DS	0	0	0	0	0	0	0	0

DISADV

HANDIC

2655

84

TALLY OF USCE CODES BY REGION 2

USCE CODE COUNT BY MAJOR AREA

01	04	07	09	14	16	17
6620	979	234	11788	1621	197	2251

CODE	TITLE	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
C10000	AGRICULTURE	2	0	0	0	0	3	0	0
C10100	AGRIC PROD	2437	33	4	0	32	2588	3	0
C10101	ANIMAL SCIENCE	699	11	45	0	12	736	1	2
C10102	PLANT SCIENCE	175	5	0	0	0	205	0	0
C10103	FARM MECHANICS	186	1	0	0	0	192	0	0
C10104	FARM BUSINESS MGT	87	0	0	0	0	87	0	1
C10199	AGRIC PRODUCTION OTH	1350	6	66	1	3	1401	1	2
C10200	AGRIC SUPPLIES/SERVI	20	0	0	0	0	20	0	0
010202	FEEDS	1	0	0	0	0	1	0	0
C10203	SEEDS	1	0	0	0	0	1	0	0
010299	AGRIC SUPPLIES/SERVI	61	1	1	0	0	66	0	3
C10300	AGRIC MECHANICS	253	1	9	0	2	255	0	0
C10301	AGRIC PWER/MACHINER	57	0	0	0	0	57	0	0
010302	AGRIC STRUC/CONVENIE	2	0	0	0	0	2	0	0
C10303	SOIL MANAGEMENT	7	0	0	0	0	7	0	0
C10305	AGRIC.MECH.SKILLS	275	1	0	0	0	280	0	0
C10306	AGRIC CONSTRUC/MAINT	2	0	0	0	0	2	0	0
C10307	AGRIC ELECTRICIFICAT	20	0	0	0	0	25	0	0
C10399	AGRIC MECHANICS OTHE	49	0	1	0	0	56	0	0
C10400	AGRICULTURAL PRODUCT	51	1	0	0	0	52	0	17
010401	FOOD PRODUCTS	15	0	0	0	0	15	0	5
C10402	NONFOOD PRODUCTS	1	0	0	0	0	1	0	0
010499	AGRIC PRODUCTS,OTHER	2	0	1	0	0	5	0	0
C10500	ORNAMENTAL HORT	22	10	0	0	0	30	0	0
010501	ARBORICULTURE	1	0	0	0	0	1	0	0
010502	FLORICULTURE	2	9	0	0	0	11	1	0
C10503	GREENHOUSE OPERATION	16	5	0	0	0	21	0	0
010504	LANDSCAPING	54	1	0	0	0	59	0	0
C10505	NURSERY OPERATION	2	0	0	0	0	2	0	2
010506	TURF MANAGEMENT	1	0	0	0	0	1	0	0
C10599	ORNAMENTAL HORTICUL	45	7	0	0	0	54	0	0
C10600	AGRIC RESOURCES	20	1	0	0	0	21	0	0
010601	FORESTS	3	0	0	0	0	3	0	0
C10603	SOIL	28	0	0	0	0	28	0	0
C10604	WILDLIFE	23	1	1	0	0	25	1	0
C10699	AGRIC RESOURCES OTHE	2	0	0	0	0	2	0	0
C10700	FORESTRY	38	0	1	0	0	38	0	0
010701	FORESTS	18	0	0	0	0	19	0	0
C10705	RECREATION	2	0	0	0	0	2	0	0
C10799	FORESTRY OTHER	12	0	0	0	0	12	0	0
019900	OTHER AGRIC	129	3	0	0	0	135	0	0
C40000	TOTAL DISTRIBUTION	108	81	1	0	0	195	75	19
C40100	ADVERTISING SERV	24	34	0	0	0	62	2	1
040200	APPAREL & ACCES	12	14	0	0	0	26	14	0
C40300	AUTOMOTIVE	24	1	5	0	0	33	2	10
C40400	FINANCE & CREDIT	2	1	0	0	0	3	1	0
040500	FLORISTRY	2	3	0	0	0	5	3	0
040600	FOOD DISTRIBUTION	36	9	0	0	0	47	21	20
040700	FOOD SERVICES	17	30	4	0	0	53	16	8
040800	GEN MERCHANDISE	14	24	3	0	0	43	24	6
040900	HDW BLDG MATERIALS	4	1	0	0	0	5	1	1
041000	HOME FURNISHINGS	5	1	0	0	0	7	1	3

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	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
041200 INDLSTRIAL MARKETING	1	0	0	0	0	1	0	0
041500 PERSONAL SERVICES	2	3	0	0	0	5	3	0
041600 PETROLEUM	6	0	0	0	0	6	3	1
041700 REAL ESTATE	1	0	0	0	0	1	1	0
041800 RECREATION & TOURISM	1	0	0	0	0	1	1	0
041900 TRANSPORTATION	18	0	0	0	0	18	16	1
042000 RETAIL TRADE	71	16	1	0	1	92	18	11
043100 WHOLESALE TRADE	5	1	0	0	0	7	2	0
049900 OTHER DIST	253	106	0	0	0	365	110	56
070100 DENTAL	0	1	0	0	0	1	0	0
070101 DENTAL ASSISTANT	8	8	0	0	0	17	5	4
070199 DENTAL, OTHER	1	0	0	0	0	1	0	0
070301 NURSE, ASSO DEGREE	1	0	2	0	0	2	0	0
070302 PRACTICAL (VOC) NURS	4	12	0	0	0	4	0	0
070303 NURSES' ASSIST (AIDE	0	31	1	0	0	32	0	13
070395 NURSING OTHER	4	2	0	0	0	6	2	1
070400 REHABILITATION	1	0	0	0	0	1	0	0
070700 ENVIRONMENTAL HEALTH	0	0	1	0	0	1	0	0
070909 MORTUARY SCIENCE	1	0	0	0	0	1	0	1
079900 OTHER HEALTH	115	38	16	0	4	151	4	3
090100 TOTAL CONSUMER & HMK	15	476	2	0	89	417	3	0
090101 COMP.HOMEMAKING	82	8473	13	1	27	8967	11	0
090102 CHILD DEVELOPMENT	0	93	0	0	0	100	0	3
090103 CLOTHING & TEXTILES	3	183	1	0	1	202	1	0
090104 CONSUMER EDUCATION	30	187	0	0	1	224	0	0
090105 FAMILY HEALTH	1	0	0	0	0	1	0	0
090106 FAMILY RELATIONS	72	360	4	0	0	448	0	0
090107 FOOD & NUTRITION	4	266	3	0	0	276	1	0
090108 HOME MANAGEMENT	0	3	0	0	0	3	0	3
090109 HOUSING/HOME FURNISH	1	262	0	0	1	272	1	0
090199 OTHER C&HM	19	587	0	0	0	625	6	1
090200 TOTAL OCCUP PREP	0	4	0	0	0	4	0	0
090201 CARE & GUID OF CHILD	1	44	0	0	0	45	1	3
090202 CLOTHING, MGT, PROD	0	1	0	0	0	2	1	0
090203 FOOD MGT, PROD & SER	14	33	0	0	0	51	0	1
090299 OTHER OCC PREP	0	1	0	0	0	1	0	0
140000 TOTAL OFFICE	0	4	0	0	0	4	0	0
140100 ACCOUNTING & COMPUTI	2	42	0	0	0	47	0	0
140102 BOOKKEEPERS	0	1	1	0	0	2	0	1
140103 CASHIERS	1	1	1	0	0	1	0	1
140104 MACHINE OPERATORS	7	29	0	0	0	38	0	2
140300 FILING, OFFICE MACH	26	102	0	0	0	131	0	0
140302 FILE CLERKS	1	0	0	0	0	1	0	0
140303 GEN.OFFICE CLERKS	5	19	1	0	0	27	2	5
140395 FILING,OFFICE MACHIN	23	511	0	0	0	575	13	1
140404 MAIL PREP/HNDLG OPRS	1	0	0	0	0	1	1	0
140405 MESSENGER & OFFICE	1	0	0	0	0	1	1	0
140406 RECPTIONIST/INFO CLK	0	1	0	0	0	1	1	0
140503 SHIP/RECEIVING CLKS	6	0	1	0	0	7	2	4
140504 STOCK/INVENT CLERKS	11	0	0	0	0	11	1	10
140595 MATERIAL SUPPORT OCC	1	0	0	0	0	1	0	1
140601 ED.ASSISTANTS	1	2	0	0	0	3	0	3
140700 STENO, SECY, & RELAT	3	23	0	0	0	27	0	0
140701 EXECUTIVE SECRETARY	0	1	0	0	0	1	0	0
140702 SECRETARIES	13	141	0	0	0	152	2	1
140703 STENOGRAPHERS	8	47	0	0	0	55	0	0
140795 STENO & SECRETARIAL	3	339	0	0	0	358	0	0
140900 TYPING & RELATED OCC	0	3	0	0	0	3	1	0
140995 TYPING/RELATED OCCUP	30	63	0	0	0	94	1	0
149900 OTHER OFFICE	3	70	0	0	0	75	4	0

	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
160102 AGRICULTURAL TECH	6	0	0	0	0	6	0	0
160104 AUTOMOTIVE TECHNOL	6	0	0	0	0	6	0	0
160108 ELECTRONICS TECHNOL	106	2	0	0	0	101	0	0
160113 MECH TECHNOL	71	2	0	0	0	72	0	0
160115 NUCLEAR TECH	1	0	0	0	0	1	0	0
160300 HEALTH-RELATED TECH	1	0	0	0	0	1	0	0
160602 FIRE & SAFETY TECHNO	0	1	0	0	0	1	0	0
170000 TOTAL TRADES, & INDLS	36	26	1	0	1	63	36	29
170100 AIR CONDITIONING	1	0	0	0	0	1	0	1
170199 AIR CONDITIONING,OTH	27	0	0	0	0	27	0	0
170200 APPLIANCE REPAIR	1	0	0	0	0	1	0	0
170201 ELECTRICAL APPLIANCE	2	1	0	0	0	4	2	2
170300 AUTOMOTIVE SERVICES	4	0	0	0	0	4	0	1
170301 BODY & FENDER	26	0	19	0	0	28	2	7
170302 MECHANICS, AUTO	214	2	0	0	0	219	3	14
170303 SPECIALIZATION OTHER	4	1	0	0	0	5	0	5
170395 OTHER AUTOMOTIVE	80	0	2	0	0	86	4	11
170499 AVIATION OCCUPATIONS	1	0	0	0	0	1	0	1
170500 BLUEPRINT READING	2	0	0	0	0	2	0	0
170600 BUS MACH MAINT	2	0	0	0	0	2	0	2
170795 COMMERICAL ART OCCUP	2	0	0	0	0	2	0	2
170995 COMMERICAL PHOTOGRAP	2	0	0	0	0	2	0	2
171000 CONSTRUC&MAINT.TRADE	31	0	2	0	0	34	0	0
171001 CARPENTRY	253	2	0	0	0	268	1	4
171002 ELECTRICITY	67	0	0	0	0	74	2	1
171003 HEAV EQUIPMENT	8	0	0	0	0	8	0	0
171004 MASONRY	31	0	0	0	0	38	0	0
171005 PAINTING & DECORAT	6	0	0	0	0	8	0	0
171007 PLUMB & PIPEFITTING	13	0	0	0	0	17	0	3
171008 DRY WALL INSTALLATIO	1	0	0	0	0	1	1	0
171009 GLAZING	29	0	0	0	0	30	0	1
171010 ROOFING	1	0	0	0	0	1	0	0
171095 OTHER CONSTR & MAINT	116	0	0	0	0	128	1	2
171100 CUSTODIAL SERV	10	0	0	0	0	10	3	6
171300 DRAFTING OCCUP	56	1	0	0	0	57	1	0
171495 ELEC OCCUP,OTHER	12	0	1	0	0	13	2	2
171502 INDUSTRIAL ELECTRONI	18	0	0	0	0	18	0	0
171503 RADIO/TELEVISION	28	0	0	0	0	28	0	0
171595 ELECTRONIC OCCUP OTH	27	0	0	0	0	27	0	0
171601 DRYCLEANING	1	0	0	0	0	1	0	1
171602 LAUNDERING	2	3	0	0	0	5	1	3
171695 FABRIC MAINTAINENCE	2	0	0	0	1	1	0	2
171705 FOREMANSHIP SUPER &	2	0	1	0	0	2	0	1
171900 GRAPHICS ARTS OCCUP	1	0	0	0	0	1	0	0
171902 PRINTING PRESS OCCUP	5	1	0	0	0	6	1	5
171995 GRAPHIC ARTS OTHER	1	0	0	0	0	1	0	0
172102 WATCHMAKING & REPAIR	1	0	0	0	0	1	1	0
172300 METALWORKING OCCUP	39	1	0	0	0	40	0	0
172301 MACHINE SHOP	148	1	0	0	0	155	3	1
172303 MACHINE TOOL OPERATI	18	1	0	0	0	19	0	0
172304 METAL TRADES COMBINE	118	0	0	0	0	120	3	4
172306 WELDING & CUTTING	3	0	0	0	0	3	0	0
172307 TOOL & DIE MAKING	0	1	0	0	0	1	0	0
172395 METALWORKING, OTHER	36	0	0	0	0	36	1	0
172600 PERSONAL SERVICES	0	1	0	0	0	1	0	0
172601 BARBERING	1	0	0	0	0	1	0	1
172602 COSMETOLOGY	0	198	0	0	0	202	2	0
172695 OTHER PERSONAL SERV	3	0	0	0	0	3	3	0
172700 PLASTICS OCCUP	2	0	0	0	0	2	1	1
172895 PUBLIC SERV,OTHER	1	0	2	0	0	3	0	1

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	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
172902 COOK/CHEF	20	1	0	0	0	21	5	16
172903 MEAT CUTTER	3	0	0	0	0	3	0	3
172904 WAITER/WAITRESS	0	9	0	0	0	11	2	9
172999 QUANTITY FOOD OCC,OT	12	0	0	0	0	12	4	8
17310C SMALL ENG REPAIR	3	0	0	0	0	4	2	2
173302 TAILORING	2	1	0	0	0	4	1	0
173399 TEXTILE PRODUCTION	1	0	0	0	0	1	1	0
17340C LEATHER WORKING	1	0	0	0	0	1	0	0
173402 SHOE REPAIR	1	0	0	0	0	1	1	0
173499 LEATHERWORKING OTHER	1	0	0	0	0	1	0	1
173600 WOOD WORKING OCCUP	2	0	0	0	0	2	0	0
173601 MILLWORK & CABINET	28	0	2	0	0	28	0	1
179900 OTHER TRGIND	271	49	5	0	0	329	130	51
555555 VOC IMPROVEMENT PROG	204	78	105	0	0	305	1	0
990000 TOTAL SPECIAL PROGRA	0	2	0	0	0	2	0	0

TALLY OF STATISTICS FOR STUDENTS
TOTALS FOR EAST TENNESSEE REGION

TYPE OF SCHOOL	NO INF	ELEM.	J.H.S.	H.SCH	PRIVAT	P.S.A.	T.INST	C.COL.	SEPSC.	OTHER
	0	0	1481	29,496	41	0				
	0%	0%	5%	95%	0%	0%	0%	0%	0%	0%

SEX	NO.INFOR.	MALE	FEMALE
	0	12848	18170
	0%	41%	59%

MARITAL STATUS	NO.INFOR.	SINGLE	MARRIED
	0	30463	555
	0%	99%	1%

VETERAN	YES	NO
0	705	30313
0%	2%	98%

EDUCATION	NO INFO	K-GARDEN	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8
	0	0	0	0	0	0	0	76	7	85
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

GRADE 9	GRADE 10	GRADE 11	GRADE 12
8586	8101	7727	6433
28%	26%	25%	21%

RACE	NO INFO	CAUCA.	BLACK	A.IND.	ORIENT.	SP.AMER	OTHER
	1515	27071	2254	55	14	60	49
	4%	87%	7%	0%	0%	0%	0%

BENEFITS EXPECTED	NONE	G.I.BILL	V.A.DISB	VOC.REHA	SOC.SEC.	WK STUDY	OTHER
	25502	93	333	407	2326	1091	1764
	82%	0%	1%	1%	7%	3%	5%

PRIOR TRAINING	NONE	DISTRI	AGRIC	HEALTH	HOME.EC	OC.H.EC.	OFF.OCC.	TRADEIND	TECH I.
	6588	1712	5294	2822	13437	388	1948	5231	299
	21%	5%	17%	9%	43%	1%	6%	16%	0%

PLANS ADVANCED TRAINING	NO INFO	NONE	HIGH SCH	A.VOC.SC	TECH IN.	COM COLL	PRI.V.S.	4-YR COL	OTHER
	2086	5828	16947	1920	382	532	146	1958	1219
	6%	18%	54%	6%	1%	1%	0%	6%	3%

CLASSIFICATION	P.SEC.	A.PREP	A.SUP.	APPREN
	0	0	0	0
	0%	0%	0%	0%

REGULAR	DISADVANTAGED	HANDICAPPED
21929	8340	1739
70%	26%	5%

AVERAGE EDUCATION OF PUPILS NOT INCLUDING UNGRADED 10.36 NO OF STUDENTS 30665

AGE OF STUDENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	0	0	0	0	0	28	1	11	140	5705	6993	7559	6411	1580	353

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
68	29	6	6	5	2	4	2	2	1	0	4	0	2	0	2	4	1	0	1

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41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
2	1	0	2	0	3	0	1	2	1	0	0	0	1	0	1	1	0	0	0

61	62	63	64	65	66	67	68	69	70
C	0	0	1	1	1	3	2	0	0

NO OF STUDENTS BY PROGRAM

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND		
6141	1812	356	13978	221	1452	291	5707		
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
24173	1877	758	594	348	2	1184	202	610	614

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	200	51	17	179	3	58	6	85
REGULR	4703	1196	198	12391	72	1140	259	4041
ACADEM	456	26	1	1125	C	210	0	59
1028.D	516	C	0	2	0	2	24	149
COOPB	5	361	23	2	0	9	0	187
COOPB	6	54	6	7	0	18	1	123
S.F.E.	1	0	0	1	0	0	0	0
PREV.	75	55	53	177	86	9	1	427
R.R.	1	0	2	1	0	0	0	91
HAND.	10	44	82	90	60	0	0	194
P.B.DS	168	25	14	3	0	6	0	351

NO OF STUDENTS BY PROGRAM BY SEX

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND		
5474	965	154	355	28	80	261	4205		
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
8450	570	642	364	236	1	673	124	407	520
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND		
225	779	222	13067	187	1316	20	1211		
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS
14705	1256	22	195	112	1	465	72	154	76

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND
NO.INF	144	28	1	10	0	1	5	53
REGULR	4232	613	64	266	5	24	230	2921
ACADEM	433	11	1	27	0	51	0	47
1028.D	413	C	0	0	0	0	24	130
COOPB	5	213	4	2	C	2	0	133
COOPB	6	21	3	1	0	2	1	96
S.F.E.	1	C	0	0	0	0	0	0
PREV.	72	30	19	0	1	0	1	335
R.R.	1	C	1	1	0	0	0	51
HAND.	10	29	57	48	22	0	0	146
P.B.DS	157	20	4	0	0	0	0	293

M

NO.INF	4	12	8	129	3	57	0	13
REGULR	211	544	126	11649	66	1067	20	951
ACADEM	8	15	0	1073	0	154	0	6
1028.D	3	C	0	2	0	0	0	0
COOPB	0	133	18	0	0	7	0	35
COOPB	0	33	3	6	0	16	0	27
S.F.E.	0	C	0	1	0	0	0	0
PREV.	0	23	33	171	82	9	0	62
R.R.	0	0	1	0	0	0	0	40
HAND.	0	14	23	33	36	0	0	27
P.B.DS	2	5	10	3	C	6	0	50

F

1962
2661

NO OF STUDENTS BY PROGRAM BY RACE

AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
5588	1570	343	12470	179	1266	247	4517			
REGULR	ACADEM	1028.C	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
21308	1757	644	495	332	1	996	125	500	500	CAUCA.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
82	163	30	852	36	126	33	860			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
1709	55	14	57	13	1	128	70	60	91	BLACK
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
8	9	1	25	0	0	1	9			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
51	2	0	1	0	0	0	0	0	1	A.IND.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
3	0	0	8	0	0	0	3			
REGULR	ACADEM	1028.C	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
11	0	1	0	0	0	0	0	0	2	ORIENT.
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
10	0	0	30	0	3	0	12			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
35	4	3	2	0	0	10	1	1	1	SP.AMER
AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND			
8	2	2	28	0	1	0	10			
REGULR	ACADEM	1028.D	COOPB	COOPB	S.F.E.	PREV.	R.R.	HAND.	P.B.DS	
29	8	2	4	0	0	2	0	0	1	OTHER

	AGRIC.	DISTRI	HEALTH	C&H.ED	O.H.ED	OFFICE	TECH.I	TR&IND	
NO.INF	145	39	9	118	2	43	5	46	
REGULR	4353	1026	173	11098	59	983	225	3248	
ACADEM	434	25	1	1047	0	199	0	51	
1028.C	407	0	0	2	0	0	16	124	
COOPB	4	307	21	1	0	9	0	149	
COOPB	6	54	5	7	0	18	0	114	
S.F.E.	0	0	0	1	0	0	0	0	
PREV.	72	53	46	117	83	8	1	327	
R.R.	1	0	0	1	0	0	0	40	
HAND.	10	43	78	78	35	0	0	151	
P.B.DS	156	23	10	0	0	6	0	267	CAUCA.
NO.INF	0	1	0	21	1	15	0	18	
REGULR	71	123	14	735	12	106	24	605	
ACADEM	5	1	0	45	0	4	0	0	
1028.C	2	0	0	0	0	0	8	4	
COOPB	0	36	1	1	0	0	0	17	
COOPB	0	0	1	0	0	0	1	6	
S.F.E.	1	0	0	0	0	0	0	0	
PREV.	0	0	7	43	0	1	0	68	
R.R.	0	0	2	0	0	0	0	50	
HAND.	0	0	1	4	23	0	0	21	
P.B.DS	3	2	4	3	0	0	0	71	BLACK
NO.INF	0	0	0	0	0	0	0	0	
REGULR	7	8	1	25	0	0	1	7	
ACADEM	1	0	0	0	0	0	0	1	
1028.C	0	0	0	0	0	0	0	0	
COOPB	0	1	0	0	0	0	0	0	
COOPB	0	0	0	0	0	0	0	0	
S.F.E.	0	0	0	0	0	0	0	0	
PREV.	0	0	0	0	0	0	0	0	
R.R.	0	0	0	0	0	0	0	0	

HAND.	0	C	0	0	0	0	0	0
P.B.DS	0	C	0	0	0	0	0	1
NC.INF	0	0	0	0	0	0	0	0
REGULR	2	C	0	8	0	0	0	1
ACADEM	0	C	0	0	0	0	0	0
1C2B.D	1	C	0	0	0	0	0	0
CCCPB	0	C	C	0	0	0	0	0
CCOPB	0	0	0	0	0	0	0	0
S.F.E.	0	C	0	0	0	0	0	0
PREV.	0	C	0	0	0	0	0	0
R.R.	0	C	0	0	0	0	0	0
HAND.	0	0	0	0	0	0	0	0
P.B.DS	0	C	0	0	0	0	0	2
NC.INF	2	C	C	1	0	0	0	0
REGULR	6	0	0	23	0	2	0	2
ACADEM	1	C	0	1	0	1	0	1
1C2B.D	1	C	C	0	C	0	0	2
CCCPB	0	0	0	0	C	0	0	1
CCOPB	C	C	0	0	0	0	0	0
S.F.E.	0	0	0	0	0	0	0	0
PREV.	0	C	0	5	0	0	0	3
R.R.	0	C	C	0	0	0	0	1
HAND.	0	C	0	0	0	0	0	1
P.B.DS	0	C	0	0	0	0	0	1
NC.INF	1	0	0	0	0	0	0	2
REGULR	2	C	2	19	0	0	0	6
ACADEM	0	C	0	7	C	1	0	0
1C2B.D	2	C	0	0	0	0	0	0
CCOPB	1	2	0	0	0	0	0	1
CCCPB	0	C	0	0	0	0	0	0
S.F.E.	0	C	C	0	0	0	0	0
PREV.	0	0	0	2	0	0	0	0
R.R.	0	C	0	0	0	0	0	0
HAND.	C	C	C	0	C	0	0	0
P.B.DS	0	0	0	0	0	0	0	1

A.IND.

ORIENT.

SP.AMER

OTHER

NO OF STUDENTS BY PROGRAM BY REGULAR, DISADVANTAGED AND HANDICAPPED

	AGRIC.	DISTRI	HEALTH	GEN.ED	O.H.ED	OFFICE	TECH.I	TRGIND
NC.INF	167	49	1	132	3	42	8	46
REGULR	3389	1021	188	9743	37	742	238	2754
ACADEM	256	17	0	690	0	167	0	34
1C2B.D	169	C	0	2	0	2	5	26
CCOPB	3	301	20	2	0	9	0	142
CCCPB	5	41	5	7	0	16	1	81
S.F.E.	0	C	C	1	0	0	0	0
PREV.	72	52	39	158	85	8	1	334
R.R.	1	0	0	1	0	0	0	9
HAND.	1	1	5	4	2	0	0	4
P.B.DS	51	2	1	0	0	2	0	39
NC.INF	29	1	16	43	0	16	0	33
REGULR	1195	157	8	2453	35	388	21	1168
ACADEM	173	9	1	419	0	40	0	17
1C2B.D	334	C	0	0	0	0	19	120
COOPB	2	6C	2	0	0	0	0	41

REGULR

CCCPB	1	12	1	0	0	2	0	38
S.F.E.	1	0	0	0	0	0	0	0
PREV.	3	3	13	19	1	1	0	82
R.R.	0	0	2	0	0	0	0	82
HAND.	0	0	58	32	57	0	0	83
P.B.DS	117	23	13	3	0	4	0	304
NO.INF	7	1	0	13	0	0	0	7
REGULR	254	26	3	468	0	16	2	179
ACADEM	38	1	0	34	0	5	0	8
IC2B.D	13	0	0	0	0	0	0	8
CCCPB	0	2	1	0	0	0	0	4
CCCPB	0	1	0	0	0	0	0	5
S.F.E.	0	0	0	0	0	0	0	0
PREV.	1	0	2	0	0	0	0	11
R.R.	0	0	0	0	0	0	0	1
HAND.	9	43	45	85	58	0	0	190
P.B.DS	4	0	0	0	0	1	0	21

DISADV

HANDIC

2664

TALLY OF USCE CODES BY REGION 3

USCE CODE COUNT BY MAJOR AREA

01	04	07	09	14	16	17
6141	1812	396	14199	1452	291	5707

CODE	TITLE	NO SEX GIVEN	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
010000	AGRICULTURE	1	1	0	2	0	0	2	0	0
010100	AGRIC PROD	60	1043	85	148	0	1	1185	0	0
010101	ANIMAL SCIENCE	75	607	81	67	0	0	760	0	0
010102	PLANT SCIENCE	4	171	0	45	0	0	175	1	0
010103	FARM MECHANICS	28	296	2	32	0	1	324	0	3
010104	FARM BUSINESS MGT	11	49	0	0	0	0	60	0	2
010199	AGRIC PRODUCTION OTH	135	1063	25	156	10	2	1219	0	0
010200	AGRIC SUPPLIES/SERVI	17	113	1	40	0	0	129	0	0
010201	AGRIC CHEMICALS	0	1	0	0	0	0	1	0	0
010202	FEEDS	0	2	0	0	0	0	2	1	0
010299	AGRIC SUPPLIES/SERVI	0	26	0	1	0	0	26	0	1
010300	AGRIC MECHANICS	29	321	0	77	0	0	347	0	0
010301	AGRIC POWER/MACHINER	2	120	0	46	0	0	121	0	0
010302	AGRIC STRUC/CONVENIE	0	2	0	0	0	0	2	0	0
010303	SOIL MANAGEMENT	0	38	0	0	0	0	38	0	0
010304	WATER MANAGEMENT	0	1	0	1	0	0	1	0	0
010305	AGRIC.MECH.SKILLS	8	256	0	57	0	0	264	2	0
010306	AGRIC CONSTRUC/MAINT	3	93	1	1	0	0	97	0	0
010307	AGRIC ELECTRICIFICAT	0	11	0	0	0	0	11	1	0
010399	AGRIC MECHANICS OTHE	1	97	0	3	0	0	98	0	0
010400	AGRICULTURAL PRODUCT	2	25	0	1	0	0	27	0	0
010401	FOOD PRODUCTS	1	0	0	0	0	0	1	0	0
010499	AGRIC PRODUCTS,OTHER	3	6	0	0	0	0	8	0	0
010500	ORNAMENTAL HORT	11	90	2	14	0	1	101	0	0
010502	FLORICULTURE	0	1	0	0	0	0	1	0	0
010504	LANDSCAPING	0	3	0	0	0	0	3	0	0
010505	NURSERY OPERATION	0	1	0	0	0	0	1	0	0
010599	ORNAMENTAL HORTICUL	0	77	8	0	0	0	85	0	0
010600	AGRIC RESOURCES	4	59	0	2	0	0	63	0	0
010601	FORESTS	0	28	6	4	0	0	34	0	0
010602	RECREATION	5	13	0	5	0	0	18	0	0
010603	SOIL	0	1	0	1	0	0	1	0	0
010604	WILDLIFE	11	91	0	29	0	0	101	0	0
010605	WATER	0	4	0	0	0	0	3	0	0
010606	AIR	0	1	0	1	0	0	1	0	0
010607	FISH	1	13	0	0	0	0	13	0	0
010608	RANGE	0	2	0	0	0	0	2	0	0
010699	AGRIC RESOURCES OTHE	0	5	0	0	0	0	5	0	0
010700	FORESTRY	6	59	0	20	0	0	65	0	0
010701	FORESTS	3	41	1	1	0	0	45	0	0
010702	FOREST PROTECTION	2	3	0	0	0	0	5	0	0
010703	LOGGING	2	21	0	2	0	0	23	0	0
010704	WOOD UTILIZATION	0	1	0	0	0	0	1	0	0
010705	RECREATION	0	4	0	0	0	0	4	0	0
010799	FORESTRY OTHER	1	71	1	0	0	0	73	0	0
019900	OTHER AGRIC	16	538	11	14	0	0	558	0	0
040000	TOTAL DISTRIBUTION	10	79	90	0	0	0	179	0	0
040100	ADVERTISING SERV	0	3	1	0	0	0	4	2	0
040200	APPAREL & ACCES	0	19	44	3	0	0	63	12	4
040300	AUTOMOTIVE	2	77	6	2	0	0	84	13	0
040400	FINANCE & CREDIT	0	0	6	0	0	0	6	2	0
040500	FLORISTRY	0	5	7	0	0	0	12	3	2

	MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
040600 FOOD DISTRIBUTION	116	34	4	0	0	160	55	5
040700 FOOD SERVICES	61	68	4	0	0	134	45	5
040800 GEN MERCHANDISE	41	86	3	0	0	140	31	4
040900 HDW BLDG MATERIALS	17	5	2	0	0	24	7	0
041000 HOME FURNISHINGS	8	1	1	0	0	10	2	0
041100 HOTEL & LODGING	5	4	0	0	0	9	2	1
041200 INDUSTRIAL MARKETING	37	22	0	0	0	60	56	0
041300 INSURANCE	5	3	0	0	0	8	0	0
041400 INTERNATIONAL TRADE	1	0	0	0	0	1	0	0
041500 PERSONAL SERVICES	20	21	0	0	0	41	25	1
041600 PETROLEUM	23	0	0	0	0	23	6	6
041700 REAL ESTATE	1	3	0	0	0	4	2	0
041800 RECREATION & TOURISM	11	20	2	0	0	33	10	0
041900 TRANSPORTATION	13	2	0	0	0	15	2	0
042000 RETAIL TRADE	32	50	3	0	0	82	19	3
043100 WHOLESALE TRADE	3	4	0	0	0	7	3	0
049900 OTHER DIST	385	301	1	44	5	698	124	23
070000 TOTAL HEALTH	4	3	1	0	0	7	2	0
070100 DENTAL	2	0	0	0	0	2	0	0
070101 DENTAL ASSISTANT	1	8	0	0	0	9	7	0
070102 DENT HYGIENISTS(ASSO	1	0	0	0	0	1	0	0
070103 DENT LAB TECH	2	0	0	0	0	2	0	0
070199 DENTAL, OTHER	1	1	0	1	0	2	0	0
070200 MED LAB ASSISTING	0	4	0	0	0	5	4	1
070300 NURSING	2	0	0	0	0	2	0	0
070301 NURSE, ASSO DEGREE	1	0	0	0	0	1	0	0
070302 PRACTICAL (VOC) NURS	6	0	0	0	0	7	0	3
070303 NURSES' ASSIST (AIDE	10	37	2	0	0	49	4	0
070399 NURSING OTHER	1	27	8	0	0	37	0	0
070499 REHABILITATION, OTHE	57	23	0	82	0	82	0	0
070501 RADIOLOGIC TECHNOLOG	0	2	0	0	0	2	1	0
070503 NUCLEAR MEDICAL TECH	1	0	0	0	0	1	0	0
070599 RADIOLOGIC, OTHER	1	0	0	0	0	1	0	0
070602 ORTHOPTICS	0	25	0	0	0	25	0	0
070700 ENVIRONMENTAL HEALTH	0	1	0	0	0	1	0	0
070900 MISC HEALTH OCCUPATI	0	1	1	0	0	1	0	0
070903 INHALATION THERAPY T	1	2	0	0	0	2	3	0
070904 MEDICAL ASSISTANT	0	1	0	0	0	1	1	0
070905 CENTRAL SUPPLY TECH	1	0	1	0	0	1	0	0
079900 OTHER HEALTH	62	87	1	11	4	149	1	2
090100 TOTAL CONSUMER & HMK	28	1173	1	0	3	1225	2	3
090101 COMP.HOMEMAKING	126	10320	49	63	48	10739	0	2
090102 CHILD DEVELOPMENT	0	107	0	0	1	111	0	0
090103 CLOTHING & TEXTILES	1	85	0	0	0	91	0	0
090104 CONSUMER EDUCATION	7	129	0	0	0	147	0	0
090105 FAMILY RELATIONS	28	175	0	0	0	212	0	0
090107 FOOD & NUTRITION	23	159	1	1	0	187	0	0
090108 HOME MANAGEMENT	0	2	0	0	0	2	0	2
090109 HOUSING/HOME FURNISH	5	194	0	0	1	201	0	0
090199 OTHER C&HM	137	723	0	28	3	880	0	0
090200 TOTAL COOP PREP	2	79	0	0	1	83	0	0
090201 CARE & GUID OF CHILD	3	54	0	0	0	57	0	0
090202 CLOTHING, MGT, PROD	0	0	0	0	0	1	0	0
090299 OTHER COOP PREP	23	51	0	75	42	34	0	0
140000 TOTAL OFFICE	1	26	0	0	0	27	0	0
140100 ACCOUNTING & COMPUTI	0	70	0	0	0	71	0	0
140101 ACCOUNTANTS	0	1	0	0	0	1	0	0
140102 BOOKKEEPERS	3	16	0	0	0	18	0	0
140103 CASHIERS	0	4	0	0	0	4	2	1
140300 FILING, OFFICE MACH	5	96	0	0	0	102	1	0

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
140303	GEN.OFFICE CLERKS	9	175	4	0	0	187	2	9
140399	FILING,OFFICE MACHIN	5	327	2	0	1	341	0	5
140499	INFOR.COMM.OCC.,OTHE	1	1	0	0	0	2	0	2
140504	STOCK/INVENT CLERKS	1	0	0	0	0	1	1	0
140599	MATERIAL SUPPORT OCC	0	1	0	0	0	1	0	1
140700	STENO, SECY, & RELAT	0	9	0	0	0	9	0	0
140702	SECRETARIES	0	10	2	0	0	10	1	0
140703	STENOGRAPHERS	0	179	0	0	0	183	0	0
140799	STENO & SECRETARIAL	2	152	0	0	1	159	0	0
140900	TYPING & RELATED OCC	1	10	0	0	0	11	0	0
140901	CLERK-TYPISTS	0	17	0	0	0	17	0	0
140902	TYPISTS	26	51	0	0	0	76	0	0
140999	TYPING/RELATED OCCUP	15	85	0	0	0	123	0	0
149900	OTHER OFFICE	11	86	0	0	0	101	2	0
160107	ELEC TECHNOL	1	0	0	0	1	0	0	0
160108	ELECTRONICS TECHNOL	61	1	0	0	0	70	0	0
160113	MECH TECHNOL	2	0	0	0	0	3	0	0
160201	ANIMAL SCIENCE	1	0	0	0	0	1	0	0
160299	AGRI-RELATED TECH,OT	30	0	0	0	0	30	0	0
160303	MEDICAL LABORATORY A	1	0	0	0	0	1	0	1
160399	HEALTH-RELATED TECH,	110	17	0	0	0	125	0	0
160605	POLICE SCIENCE	30	2	0	0	0	31	0	0
160699	MISC. TECH. ED,OTHER	25	0	24	0	0	25	0	0
170000	TOTAL TRADES & INDUS	239	187	134	0	0	434	7	0
170100	AIR CONDITIONING	1	0	0	0	0	1	0	0
170101	COOLING	30	0	0	0	0	34	0	0
170199	AIR CONDITIONING,OTH	1	0	1	0	0	1	0	0
170200	APPLIANCE REPAIR	1	0	0	0	0	1	0	0
170201	ELECTRICAL APPLIANCE	44	0	0	0	0	46	3	1
170300	AUTOMOTIVE SERVICES	11	0	0	0	0	11	0	0
170301	BODY & FENDER	144	1	2	3	0	150	1	0
170302	MECHANICS, AUTO	511	5	70	0	0	551	15	3
170303	SPECIALIZATION OTHER	17	0	0	0	0	17	0	0
170399	OTHER AUTOMOTIVE	50	2	42	18	9	56	3	0
170401	AIRCRAFT MAINTENANCE	1	0	0	0	0	1	1	0
170402	AIRCRAFT OPERATIONS	0	0	0	0	0	1	1	0
170500	BLUEPRINT READING	1	0	0	0	0	1	0	0
170700	CML ART OCCUP	33	25	0	0	0	60	0	0
170701	INTERIOR DECORATING	0	1	0	0	0	1	1	0
170702	WINDOW DISPLAY	1	1	1	0	0	2	0	0
170799	COMMERICAL ART OCCUP	0	1	0	0	0	1	1	0
170900	CML PHOTOG OCCUP	1	1	1	0	0	3	1	0
170901	PHOTOGRAPHIC LAB	2	0	0	0	0	3	1	0
170999	COMMERICAL PHOTOGRAP	14	15	0	0	0	29	2	1
171000	CONSTRUC&MAINT.TRADE	252	2	1	0	0	265	0	1
171001	CARPENTRY	189	1	76	0	0	199	1	0
171002	ELECTRICITY	45	0	0	0	0	48	0	0
171003	HEAV EQUIPMENT	1	0	0	0	0	1	0	0
171004	MASONRY	112	2	46	0	0	120	0	0
171005	PAINTING & DECORAT	3	1	3	0	0	4	0	0
171007	PLUMB & PIPEFITTING	5	3	3	0	0	8	1	0
171009	GLAZING	0	0	0	0	0	1	1	0
171010	ROOFING	15	0	0	0	0	15	0	0
171099	OTHER CONSTR & MAINT	72	0	3	16	1	73	0	2
171100	CUSTODIAL SERV	30	2	5	14	7	28	11	0
171300	DRAFTING OCCUP	346	33	0	0	0	404	4	0
171400	ELEC OCCUP	41	0	0	0	0	41	0	0
171401	INDUSTRIAL ELECTRICI	25	0	26	0	0	26	0	0
171499	ELEC OCCUP,OTHER	30	1	0	0	0	30	1	0
171500	ELECTRONIC OCCUP	10	0	0	0	0	10	0	0

		MALE	FEMALE	DISAD	HANDI	BELOW GRADE 9	GRADES 9-12	COOPB	COOPG
171501	COMMUNICATIONS	2	1	0	0	0	3	3	0
171503	RADIO/TELEVISION	129	3	4	1	5	129	1	0
171599	ELECTRONIC OCCUP OTH	26	0	0	0	0	27	0	0
171601	DRYCLEANING	2	0	0	0	0	2	0	0
171602	LAUNDERING	1	0	0	0	0	2	2	0
171700	FOREMANSHIP SUPER &	7	1	0	0	0	8	8	0
171900	GRAPHICS ARTS OCCUP	3	0	0	0	0	3	2	1
171901	COMPOSITION MAKEUP T	15	5	0	0	0	22	0	0
171902	PRINTING PRESS OCCUP	11	4	0	0	0	17	1	0
171903	LITHOG/PHOTO/PLATE	20	6	0	27	0	0	0	0
171999	GRAPHIC ARTS OTHER	17	0	1	0	0	17	2	0
172300	METALWORKING OCCUP	39	0	0	0	0	38	0	0
172301	FOUNDRY	9	0	0	0	0	11	2	0
172302	MACHINE SHOP	244	0	21	1	3	243	1	0
172303	MACHINE TOOL OPERATI	2	0	0	0	0	2	0	0
172304	METAL TRADES COMBINE	68	0	0	0	0	75	0	0
172305	SHEET METAL	115	2	25	0	0	120	0	0
172306	WELDING & CUTTING	167	0	23	0	1	171	1	0
172309	METAL PATTERNMAKING	1	0	0	0	0	1	0	0
172399	METALWORKING, OTHER	1	0	0	0	0	1	1	0
172602	COSMETOLOGY	0	434	27	13	0	439	0	0
172699	OTHER PERSONAL SERV	0	40	0	0	0	41	0	0
172700	PLASTICS OCCUP	4	0	0	0	0	5	4	0
172899	PUBLIC SERV.OTHER	9	0	0	0	0	9	0	0
172900	QUANTITY FOOD OCCUPA	1	0	0	0	0	1	1	0
172901	BAKER	1	0	0	0	0	1	1	0
172902	COOK/CHEF	32	38	2	0	1	69	14	0
172903	MEAT CUTTER	5	0	0	0	0	6	5	0
172904	WAITER/WAITRESS	12	17	10	0	0	30	2	5
172999	QUANTITY FOOD OCC,OT	22	27	3	2	2	53	0	6
173000	REFRIGERATION	42	3	0	0	0	45	0	0
173100	SMALL ENG REPAIR	3	0	0	0	0	3	2	0
173299	STAT.ENERGY SOURCES,	1	0	0	0	0	1	0	0
173300	TEXTILE PROD & FAB	0	2	0	0	0	2	1	0
173302	TAILORING	8	46	0	0	0	61	0	0
173399	TEXTILE PRODUCTION	10	2	0	0	0	13	2	7
173402	SHOE REPAIR	12	0	0	0	0	13	0	0
173500	UPHOLSTERING	3	0	0	0	0	3	1	2
173600	WOODWORKING OCCUP	16	12	0	0	1	29	1	26
173601	MILLWORK & CABINET	139	4	29	1	0	165	1	0
173699	WOODWORKING OTHER	9	1	0	0	0	13	11	2
179900	OTHER TRGIND	718	279	8	106	36	982	61	66
555555	VOC IMPROVEMENT PROG	351	121	157	35	17	446	1	8
990000	TOTAL SPECIAL PROGRA	3	0	0	2	0	3	0	0

STATEWIDE TOTAL VOCATIONAL COURSES OFFERED BY SECONDARY SCHOOLS IN TENNESSEE, SCHOOL YEAR 1971-1972*

USOE Code	Number of Courses	Job Title	USOE Code	Number of Courses	Job Title
010100	69	Agric. Products	010704	0	Wood Utilization
010101	14	Animal Science	010705	0	Recreation
010102	4	Plant Science	010706	0	Special Products
010103	6	Farm Mechanics	010799	1	Forestry Other
010104	0	Farm Business Mgt.	019900	20	Other Agriculture
010199	46	Agric. Prod. Other	040000	28	Total Distribution
010200	0	Agric. Supp/Service	040100	2	Advertising Serv
010201	0	Agric. Chemicals	040200	0	Apparell & Acces
010202	0	Feeds	040300	0	Automotive
010203	0	Seeds	040400	0	Finance & Credit
010204	0	Fertilizers	040500	0	Floristry
010299	1	Agric. Supp/Service	040600	0	Food Distribution
010300	4	Agric. Mechanics	040700	1	Food Services
010301	0	Agric. Power/Machin.	040800	1	Gen Merchandise
010302	0	Agric. Struc/Conven	040900	0	Hdw Bldg Materials
010303	1	Soil Management	041000	0	Home Furnishings
010304	0	Water Management	041100	0	Hotel & Lodging
010305	3	Agric. Mech. Skills	041200	0	Industrial Marketing
010306	1	Agric. Construc/Main	041300	5	Insurance
010307	0	Agric. Electrifica	041400	0	International Trade
010399	0	Agric. Mechanics Oth	041500	0	Personal Services
010400	1	Agric. Product	041600	0	Petroleum
010401	0	Food Product	041700	0	Real Estate
010402	0	Nonfood Products	041800	0	Recreation & Tour
010499	0	Agric. Products Oth	041900	4	Transportation
010500	4	Ornamental Horticul	042000	2	Retail Trade
010501	0	Aboriculture	043100	0	Wholesale Trade
010502	0	Floriculture	049900	86	Other Dist
010503	0	Greenhouse Operation	070000	5	Total Health
010504	1	Landscaping	070100	0	Dental
010505	0	Nursery Operation	070101	0	Dental Assistant
010506	0	Turf Management	070102	0	Dental Hygienists (Assoc)
010599	1	Ornamental Horticulture	070199	1	Dental, Other
010600	0	Agric. Resources	070103	0	Dental Lab Tech
010601	0	Forests	070200	0	Med Lab Tech
010602	0	Recreation	070201	0	Cytology
010603	0	Soil	070202	0	Histology
010604	0	Wildlife	070203	0	Med Lab Assisting
010605	0	Water	070204	0	Hematology
010606	0	Air	070299	0	Other Med Lab Tech
010607	0	Fish	070300	1	Nursing
010608	0	Range	070301	0	Nurse, Assoc Degree
010699	0	Agric. Resources Other	070302	21	Practical (Voc) Nurse
010700	0	Forestry	070303	4	Nurses' Assist (Aide)
010701	0	Forests	070304	0	Psychiatric Aide
010702	0	Forest Protection	070305	3	Surgical Technician
010703	1	Logging	070306	0	Obstetrical Technician

*The above figures omit DeKalb, Lewis, Gibson, and part of Davidson counties.

USOE Code	Number of Courses	Job Title
070307	2	Home Health Aide
070308	0	School Health Aide
070399	2	Nursing Other
070400	0	Rehabilitation
070401	0	Occupational Thera
070402	0	Physical Therapy
070403	0	Prosthetics
070404	0	Orthotics
070499	7	Rehabilitaton, Other
070500	0	Radiologic
070501	0	Radiologic Techno
070502	0	Radiation Therapy
070503	0	Nuclear Medical Tech
070599	0	Radiologic, Other
070600	0	Ophthalmic
070601	0	Ophthalmic Dispens
070602	1	Orthoptics
070603	0	Optometrist Assist
070699	0	Opthalmic, Other
070700	0	Environmental Health
070701	0	Environmental Health
070702	0	Radiological Health
070703	0	Sanitarian Assist
070799	0	Environmental Health
070800	0	Mental Health Tech
070801	0	Mental Health Tech
070802	0	Mental Retardation
070899	0	Mental Health, Other
070900	0	Misc Health Occupa
070901	0	Electroencephalograp
070902	0	Electrocardiograph
070903	0	Inhalation Thereapy T
070904	0	Medical Assistant
070905	0	Central Supply Tech
070906	0	Health Aide
070907	0	Medical Emergency Tec
070908	0	Food Service Super
070909	0	Mortuary Science
070910	0	Orthopedic Assisting
079900	12	Other Health
090100	45	Total Consumer & Hmk
090101	334	Comp. Homemaking
090102	3	Child Development
090103	19	Clothing & Textiles
090104	3	Consumer Education
090105	1	Family Health
090106	2	Family Relations
090107	5	Food & Nutrition
090108	0	Home Management
090109	2	Housing/Home Furnish
090199	18	Other C&Hm
090200	3	Total Occup Prep
090201	13	Care & Guid of Child
090202	2	Clothing, Mgt, Prod
090203	7	Food Mgt, Prod & Ser
090204	0	Home Furnishing, Equ
090205	0	Inst & Home Mgt & S
090299	17	Other Occ Prep
140000	9	Total Office
140100	10	Accounting & Comput
140101	0	Accountants
140102	1	Bookkeepers
140103	0	Cashiers
140104	1	Machine Operators
140105	4	Tellers
140199	0	Accting/Computing Op
140200	0	Bus Data Processing
140201	0	Computer and Console
140202	0	Peripherial Equip
140203	0	Programmers
140204	0	Systems Analysts
140299	4	Bus Data Proc Sys
140300	10	Filing, Office Mach
140301	0	Duplicating Machine
140302	1	File Clerks
140303	5	Gen. Office Clerks
140399	40	Filing, Office Mach
140400	0	Info Communic Occup
140401	0	Comm Sys Clerks/Oper
140402	0	Correspondence Clerk
140403	0	Mail & Postal Clks
140404	0	Mail Prep/Hndlg Oprs
140405	0	Messenger & Office
140406	0	Receptionist/Info Clk
140499	0	Infor.Comm.Occ.,Other
140500	0	Mtls Supp,Trans,Et
140501	0	Planning and Product
140502	0	Quality Control
140503	0	Ship/Receiving Clks
140504	0	Stock/Invent Clerks
140505	0	Traffic, Rate & Trans.
140599	0	Material Support Occ
140600	0	Pers, Trg, & Related
140601	0	Ed. Assistants
140602	0	Interviewers
140603	0	Personnel Assistants
140699	0	Personnel, Tr & Rel, Oth
140700	7	Steno, Secy, & Related
140701	0	Executive Secretary
140702	3	Secretaries
140703	4	Stenographers
140799	27	Steno & Secretarial
140800	0	Supv & Admin Mgt
140801	0	Adm. Assistants
140802	0	Budget Management An
140803	0	Clerical & Off Super

USOE Code	Number of Courses	Job Title
140804	0	Data-Methods Analyst
140805	0	Office Managers
140899	0	Super & Adm.M.Acc.Oth
140900	35	Typing & Related Occ
140901	3	Clerk-Typists
140902	1	Typists
140999	13	Typing/Related Occup
149900	20	Other Office
160000	2	Total Technical
160100	0	Eng.Rel.Tech.
160101	0	Aeronautical Tech
160102	0	Agricultural Tech
160103	0	Archit Technology
160104	1	Automotive Tech
160105	1	Chemical Tech
160106	0	Civil Tech
160107	2	Elec Technology
160108	11	Electronics Tech
160109	1	Electro-Mech Tech
160110	0	Environmental Control
160111	0	Indus Technology
160112	0	Instr Technology
160113	4	Mech Technology
160114	0	Metall Technology
160115	0	Nuclear Tech
160116	0	Petroleum Tech
160117	0	Sci Data Technology
160199	2	Eng.Related Tech,Oth
160200	0	Agric.Related Tech
160201	1	Animal Science
160202	0	Dairy Tech
160203	0	Food Processing Tech
160204	0	Plant Science
160299	0	Agri-Related Tech,Oth
160300	0	Health-Related Tech
160301	0	Dental Hygiene
160302	0	Electroencephalograph
160303	0	Medical Laboratory
160304	0	Radiologic Technology
160305	0	Nursing
160399	0	Health-Related Tech
160400	0	Office-Related Tech
160401	1	Computer Programmer
160402	0	System Analyst Tech
160499	0	Office-Related Tech
160500	0	Home Economics-Rel T
160501	0	Child Care Center Asst
160502	0	Hospital Children Di
160503	0	Teachers Assistant
160504	0	Food Service Super
160505	0	Interior Decorator
160506	0	Home Equipment Demon
160599	0	Home Ec Rel.Tech,Oth
160600	0	Misc Tech Education
160601	0	Commerical Pilot Trg
160602	0	Fire & Safety Tech
160603	0	Forestry Technology
160604	0	Oceanographic Tech
160605	1	Police Science
160699	5	Misc Tech Ed, Other
170000	22	Total Trades & Indus
170100	4	Air Conditioning
170101	2	Cooling
170102	0	Heating
170103	0	Ventilating
170199	1	Air Conditioning,Oth
170200	0	Appliance Repair
170201	5	Electrical Appliance
170202	0	Gas Appliances
170300	1	Automotive Services
170301	9	Body & Fender
170302	47	Mechanics, Auto
170303	1	Specialization Other
170399	8	Other Automotive
170400	0	Aviation Occup
170401	1	Aircraft Maintenance
170402	0	Aircraft Operations
170403	0	Ground Operations
170499	0	Aviation Occupations
170500	0	Blueprint Reading
170600	0	Bus Mach Maint
170700	2	Cml Art Occup
170701	0	Interior Decorating
170702	0	Window Display
170703	0	Product Design
170799	3	Commerical Art Occup
170800	0	Cml Fishery Occup
170801	0	Seamanship
170802	0	Ship/Boat Operation
170899	0	Commerical Fishery
170900	2	Cml Photog Occup
170901	0	Photographic Lab
170999	2	Commercial Photograph
171000	23	Construc & Maint.Trade
171001	31	Carpentry
171002	13	Electricity
171003	0	Heavy Equipment
171004	11	Masonry
171005	2	Painting & Decorat
171006	0	Plastering
171007	9	Plumb & Pipefitting
171008	0	Dry Wall Installation
171009	0	Glazing
171010	1	Roofing

USOE Code	Number of Courses	Job Title
171099	20	Other Constr & Maint
171100	2	Custodial Service
171200	0	Diesel Mech
171300	24	Drafting Occup
171400	3	Elec Occup
171401	2	Industrial Electri
171402	0	Lineman
171403	0	Motor Repairman
171499	2	Elec Occup, Other
171500	4	Electronic Occup
171501	0	Communcations
171502	1	Industrial Electron
171503	13	Radio/Television
171599	5	Electronic Occup Oth
171600	0	Fabric Maint Serv
171601	0	Drycleaning
171602	0	Laundering
171699	0	Fabric Maintainen
171700	4	Foremanship Super &
171800	0	General Continuation
171900	6	Graphics Arts Occup
171901	1	Composition Makeup
171902	1	Printing Press Occup
171903	2	Lithog/Photo/Plate
171904	0	Photoengraving
171905	0	Silk Screen Making
171906	0	Bookbinding
171999	3	Graphic Arts Other
172000	0	Ind Atomic Energy
172001	0	Install,Oper-React
172002	1	Radiography
172003	0	Uses of Radioisotope
170299	0	Ind. Atomic Energy,Oth
172100	0	Instru Maint & Repair
172101	0	Instruments
172102	0	Watchmaking & Repair
172200	0	Maritime Occup
172300	4	Metalworking Occup
172301	0	Foundry
172302	26	Machine Shop
172303	2	Machine Tool Opera
172304	13	Metal Trades Combine
172305	6	Sheet Metal
172306	17	Welding & Cutting
172307	0	Tool & Die Making
172308	0	Die Sinking
172309	0	Metal Patternmaking
172399	7	Metalworking, Other
172400	0	Metall Occupations
172600	1	Personal Services
172601	0	Barbering
172602	47	Cosmetology
172699	0	Other Personal Serv
172700	0	Plastics Occup
172800	0	Public Service Occup
172801	0	Fireman Training
172802	0	Law Enforcement Tr.
172899	0	Public Serv Other
172900	0	Quality Food Occup
172901	0	Baker
172902	4	Cook/Chef
172903	0	Meat Cutter
172904	1	Waiter/Waitress
172999	2	Quantity Food Occ,Oth
173000	2	Refrigeration
173100	1	Small Eng Repair
173200	0	Stationary Energy So
173201	0	Electric Power Gen P
173202	0	Pumping Plants
173299	1	Stat. Energy Sources
173300	0	Textile Prod & Fab
173301	0	Dressmaking
173302	5	Tailoring
173399	0	Textile Production
173400	0	Leather Working
173401	0	Shoe Manufacturing
173402	2	Shoe Repair
173499	0	Leatherworking Other
173500	7	Upholstering
173600	2	Woodworking Occup
173601	8	Millwork & Cabinet
173699	4	Woodworking Other
179900	74	Other Trade & Ind
444444	9	Spec. Handicap Student
555555	4	Voc Improvement Prog
990000	0	Total Special Program
990100	0	Group Guidance Prev
990200	0	Prepost Secondary
990300	0	Remedial
990400	0	Other N.E.C.

SUPPLEMENTARY
TWO-DIGIT COMPILATION

01	16
04	3
07	2
09	31
14	9
16	1
17	23
Misc.	235

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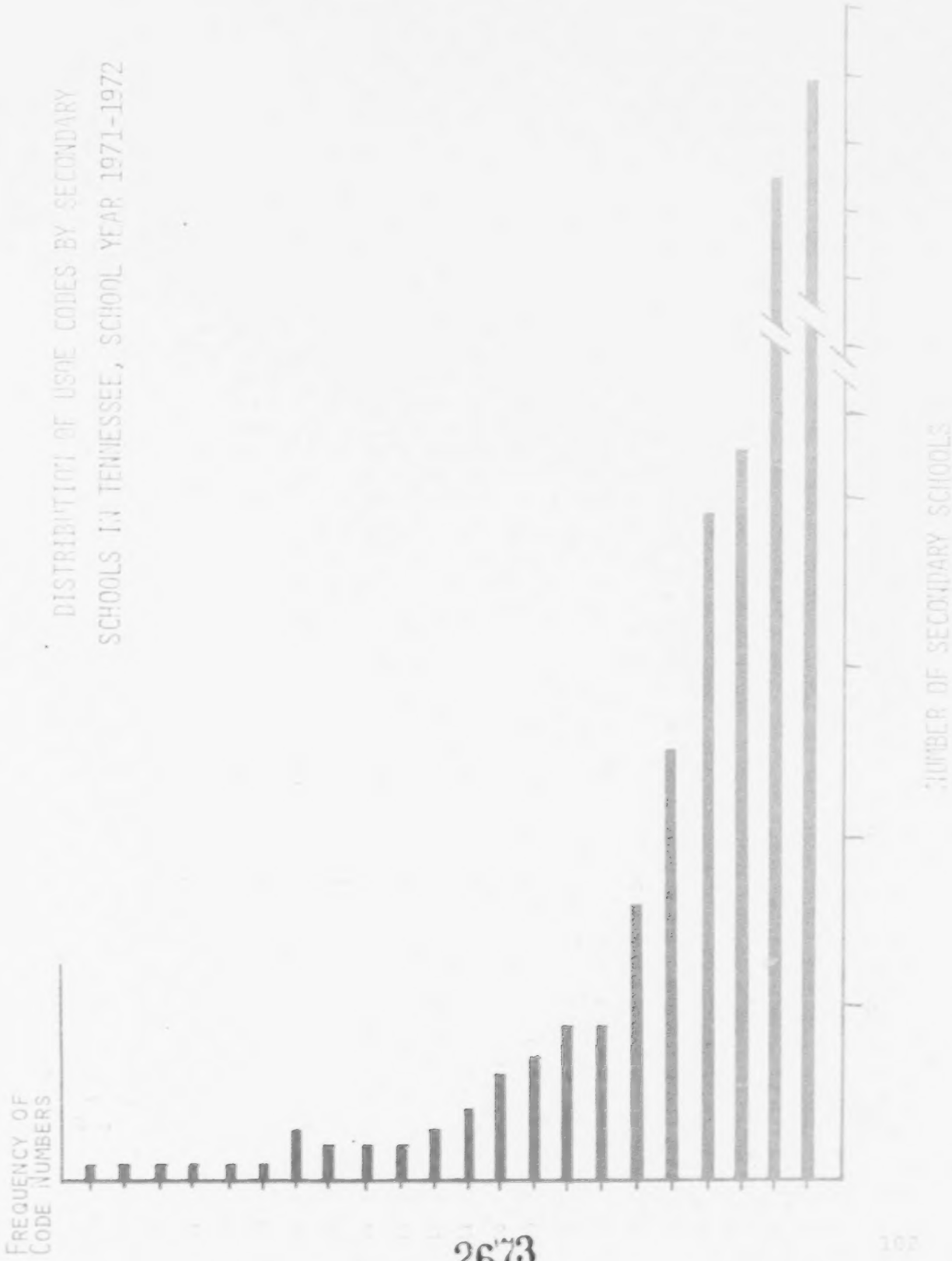

INTRODUCTION TO MAPS AND CHARTS

The charts and graphs which follow are detailed to identify conclusions based on information obtained during the period of this project. In some instances, comparisons are made to the information found in the 1971 Status and Image of Vocational-Technical Education.

The eight basic vocational programs are arrayed throughout the state as a function of local demand for such programs. Several Tennessee maps are found on pages 104 through 113 detailing counties teaching the basic vocational subject areas. It is interesting to note the two oldest subject areas--agriculture and home economics--are being taught in one or more high schools in a variety of curricula concepts in almost every county in Tennessee. On the other hand, the two newer areas--occupational home economics and health occupations--have sparse offerings.

The map on page 113 illustrates a detailed survey of those counties providing course work in two or more basic vocational programs. As would be expected, the greatest number of programs are to be found in the large metropolitan areas such as Shelby, Hamilton, Knox, Washington and Davidson counties.

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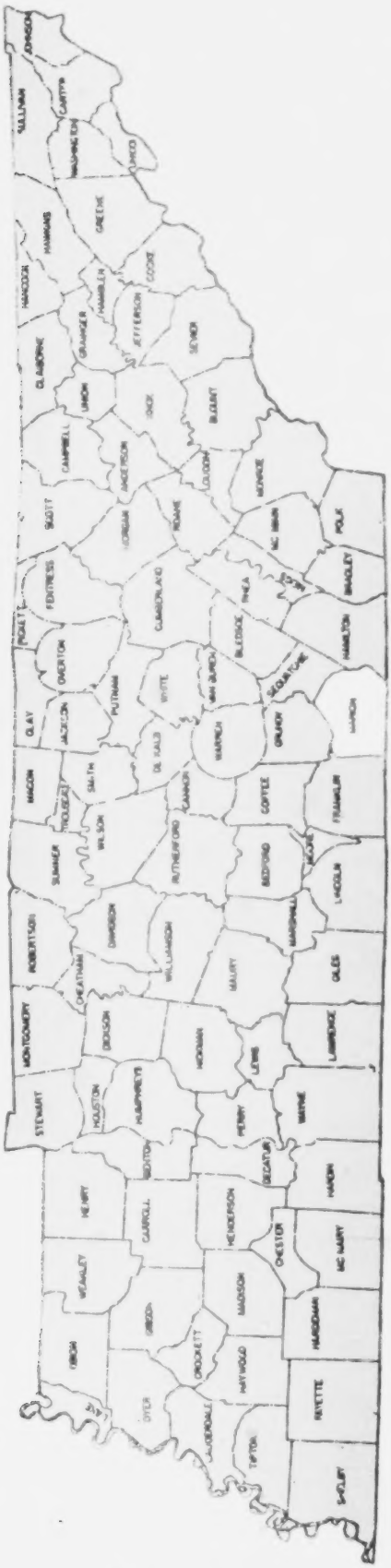
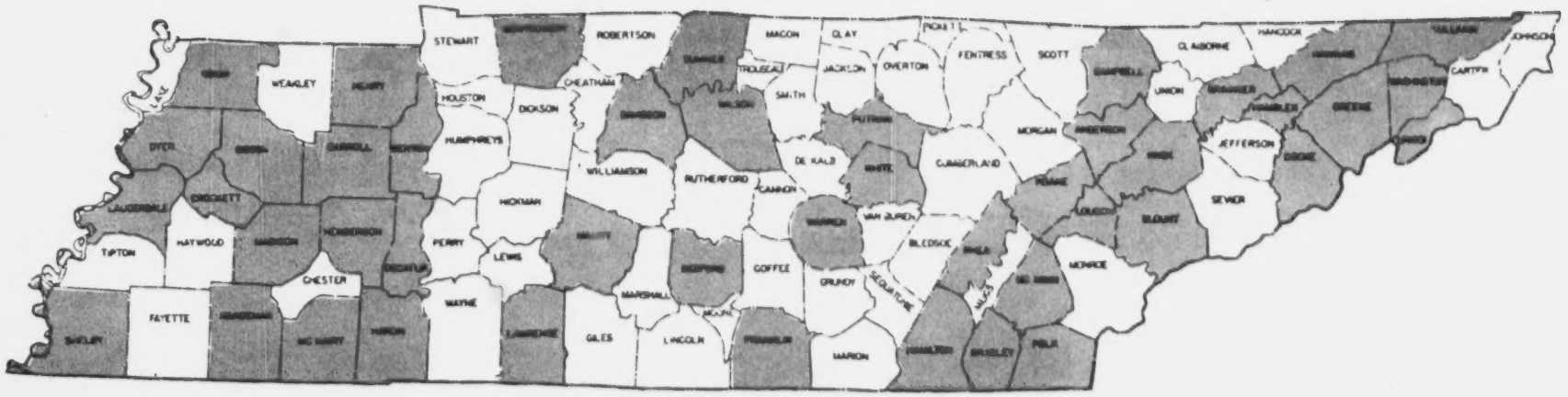
SECONDARY AGRICULTURE PROGRAMS BY COUNTY



2675

SECONDARY DISTRIBUTIVE EDUCATION PROGRAMS BY COUNTY



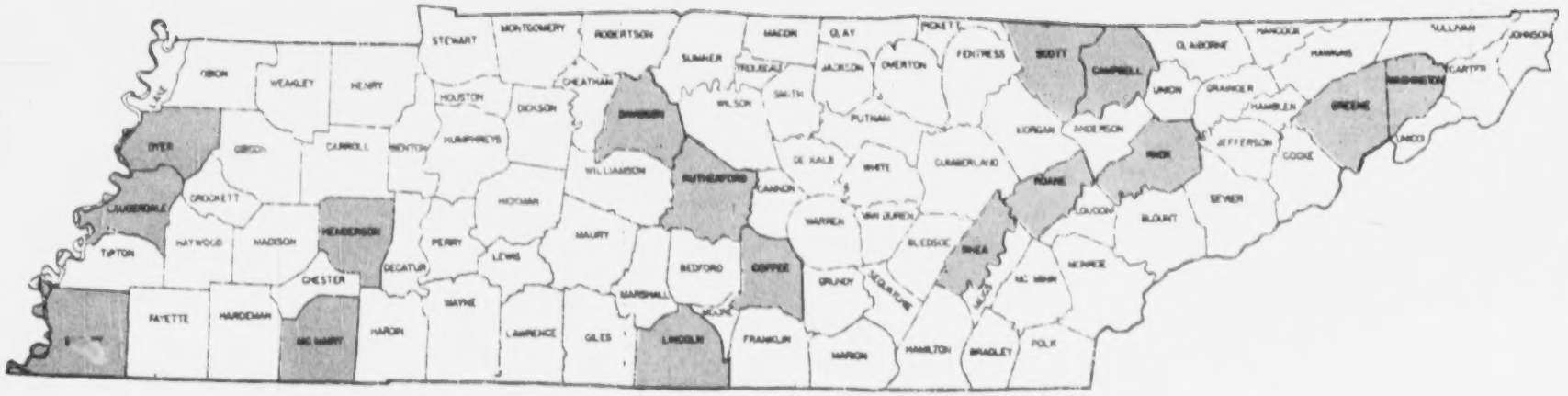
2676

SECONDARY CONSUMER AND HOMEMAKING ECONOMICS PROGRAMS BY COUNTY

2477

106

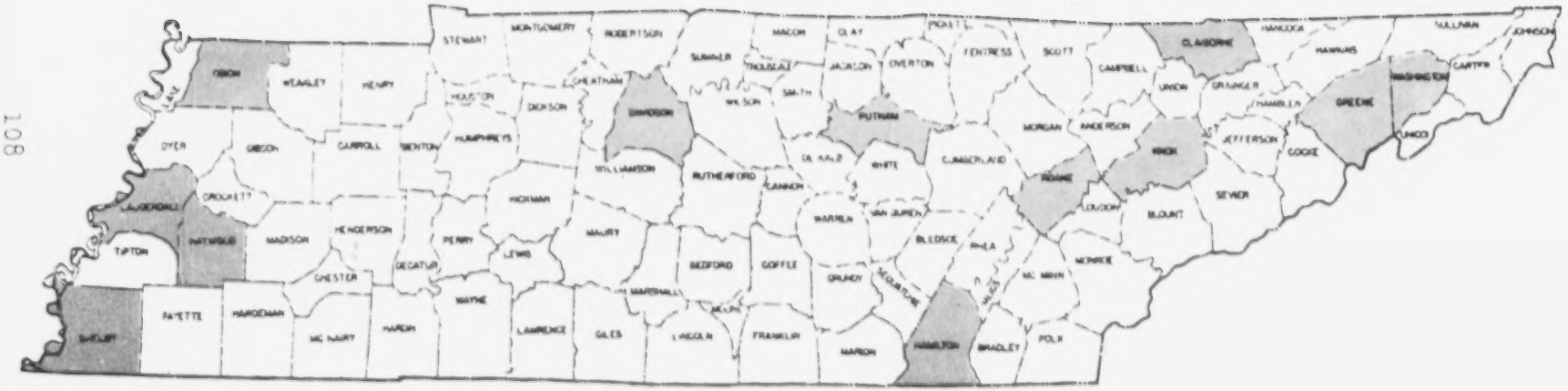
SECONDARY OCCUPATIONAL HOME ECONOMICS PROGRAMS BY COUNTY



107

8278

SECONDARY HEALTH OCCUPATIONS PROGRAMS BY COUNTY



2679

SECONDARY OFFICE OCCUPATIONS PROGRAMS BY COUNTY

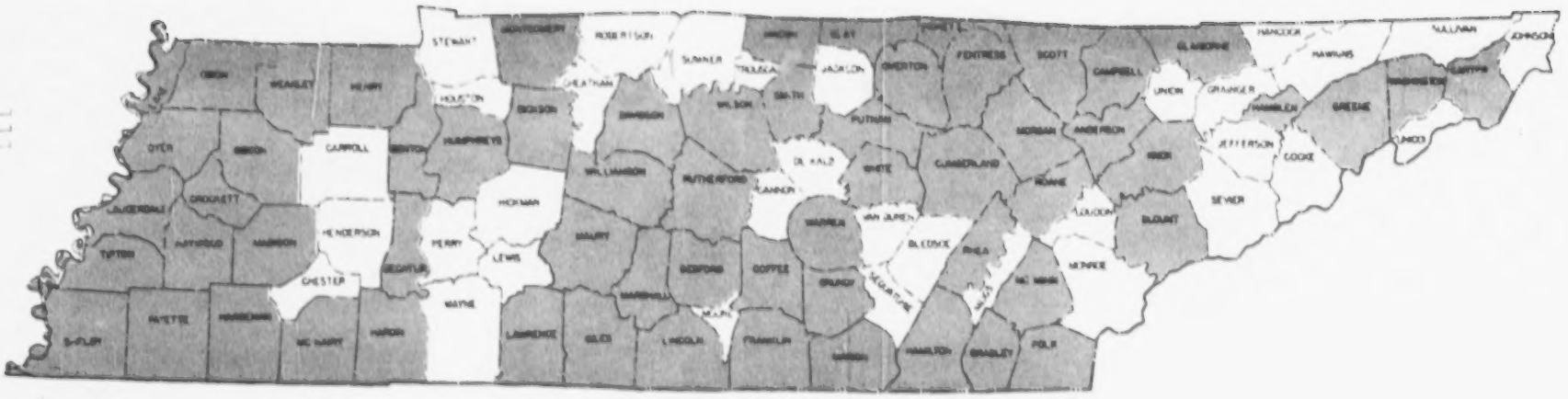
2680

SECONDARY TECHNICAL EDUCATION PROGRAMS BY COUNTY

1892

STEWART
MONTGOMERY
ROBERTSON
SUMNER
MACON
TROUSDALE
GIBSON
CROCKETT
HAYWOOD
TIPTON
LAUDERDALE
OBION
WEAKLEY
HENRY
HOUSTON
HUMPHREYS
DICKSON
CHEATHAM
DAVIDSON
WILSON
SMITH
JACKSON
OVERTON
PUTNAM
FENTRESS
SCOTT
CAMPBELL
UNION
CLAIBORNE
GRAINGER
HANCOCK
HAWKINS
GREENE
WASHINGTON
CARTER
JOHNSON
SULLIVAN
HANCOCK
HAMBLEN
JEFFERSON
COCKE
SEVIER
BLOUNT
KNOX
MONROE
POLK
MEIGS
RHEA
ROANE
ANDERSON
CAMPBELL
CLAIBORNE
GRAINGER
HAWKINS

SECONDARY TRADES AND INDUSTRY PROGRAMS BY COUNTY


STEWART
MONTGOMERY
ROBERTSON
SUMNER
TROUSDALE
GIBSON
CROCKETT
HAYWOOD
FAYETTE
HARDEMAN
MCNAIRY
HARDIN
HENDERSON
CHESTER
DECATUR
PERRY
LEWIS
WAYNE
HICKMAN
LAWRENCE
GILES
MAURY
MARSHALL
LINCOLN
FRANKLIN
MARION
SEQUATCHIE
HAMILTON
BRADLEY
POLK
RHEA
MEIGS
MONROE
MC MINN
BLOUNT
SEVIER
JEFFERSON
COCKE
GREENE
HAWKINS
SULLIVAN
JOHNSON
UNICOI
CARTER
WASHINGTON
UNION
CLAIBORNE
CAMPBELL
SCOTT
FENTRESS
OVERTON
PUTNAM
WHITE
CUMBERLAND
MORGAN
ANDERSON
KNOX
GRAINGER
HAMBLEN
JEFFERSON
CLAY
SMITH
JACKSON
DE KALB
WARREN
VAN BUREN
BLEDSOE
ROANE
CANNON
WILSON
RUTHERFORD
WILLIAMSON
DAVIDSON
ROBERTSON
SUMNER
TROUSDALE
GIBSON
CARROLL
HENRY
WEAKLEY
OBION
DYER
LAUDERDALE
TIPTON
MADISON
CROCKETT
HAYWOOD
HUMPHREYS
HOUSTON
STEWART
MONTGOMERY

SECONDARY GENERAL BUILDING TRADES PROGRAMS BY COUNTY

2683

112

NUMBER OF SECONDARY VOCATIONAL PROGRAM AREAS OFFERED BY COUNTY, SCHOOL YEAR 1971-1972

Number of Programs

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8

2684

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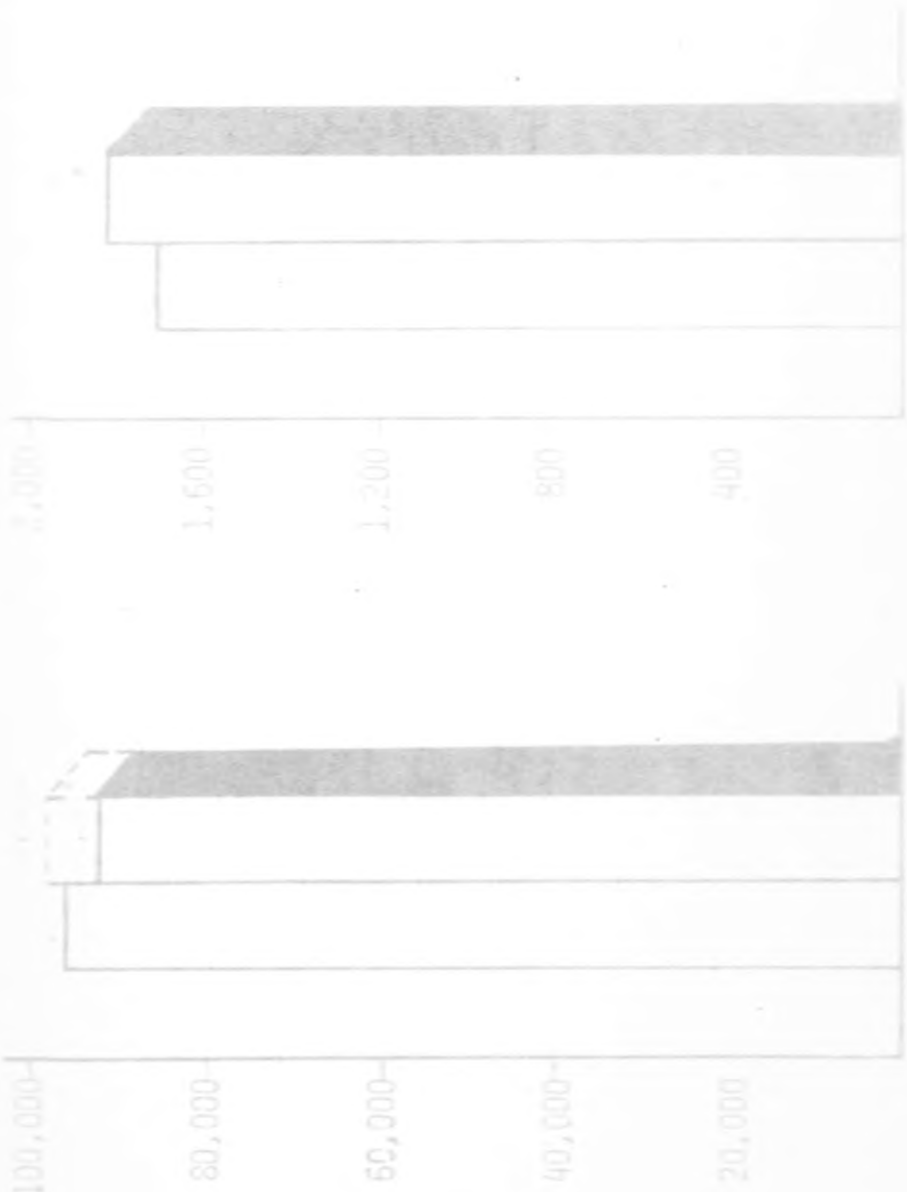
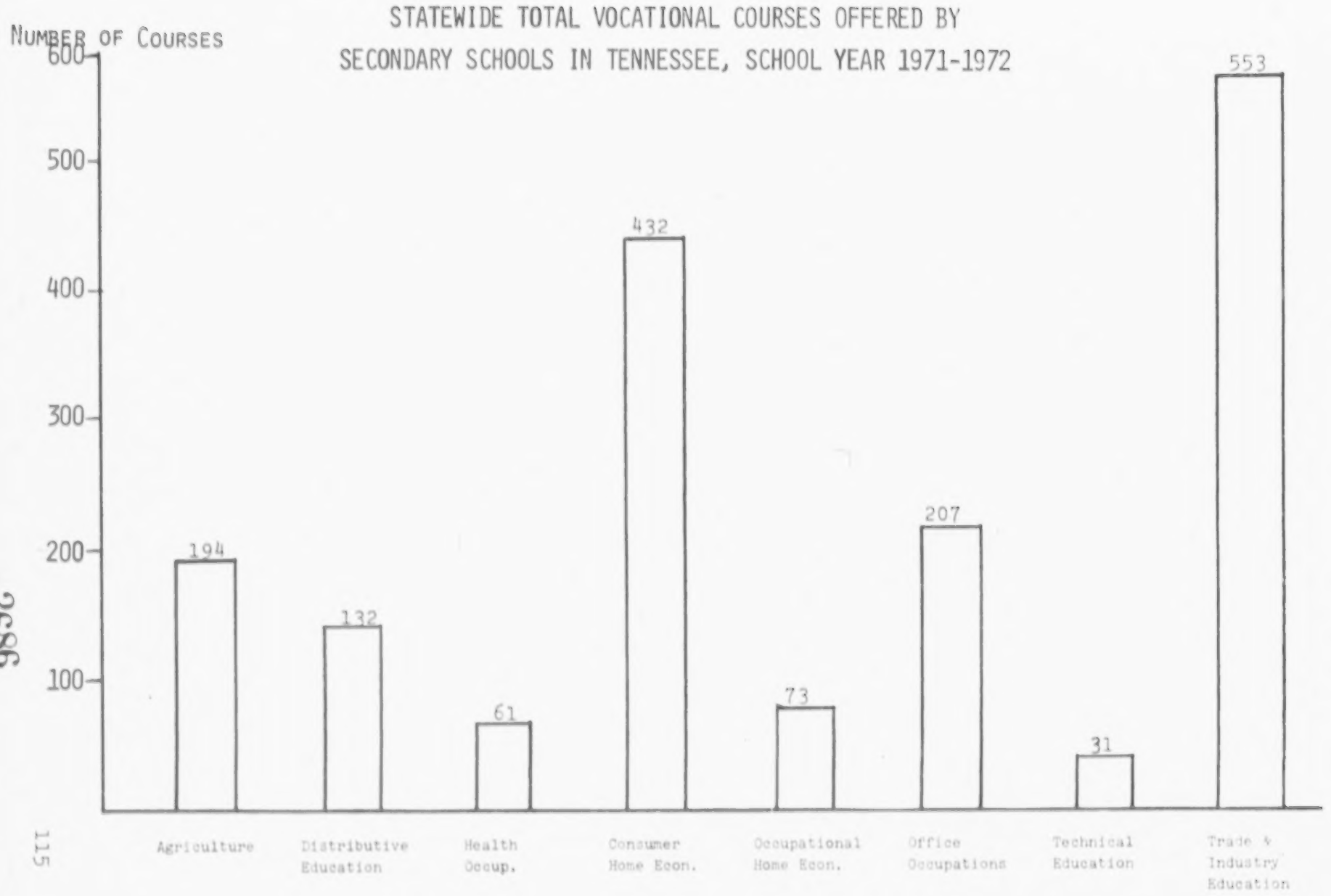
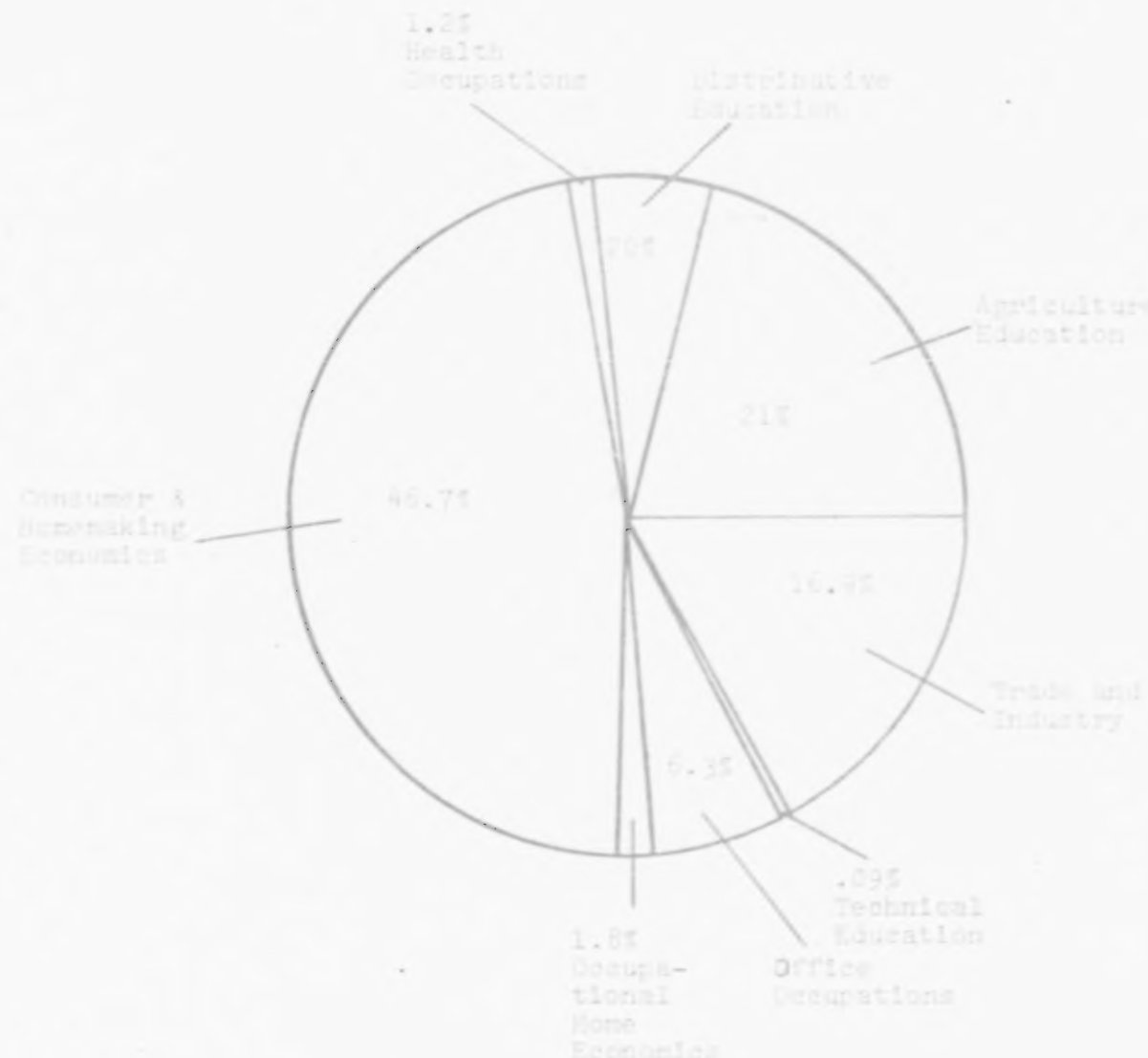


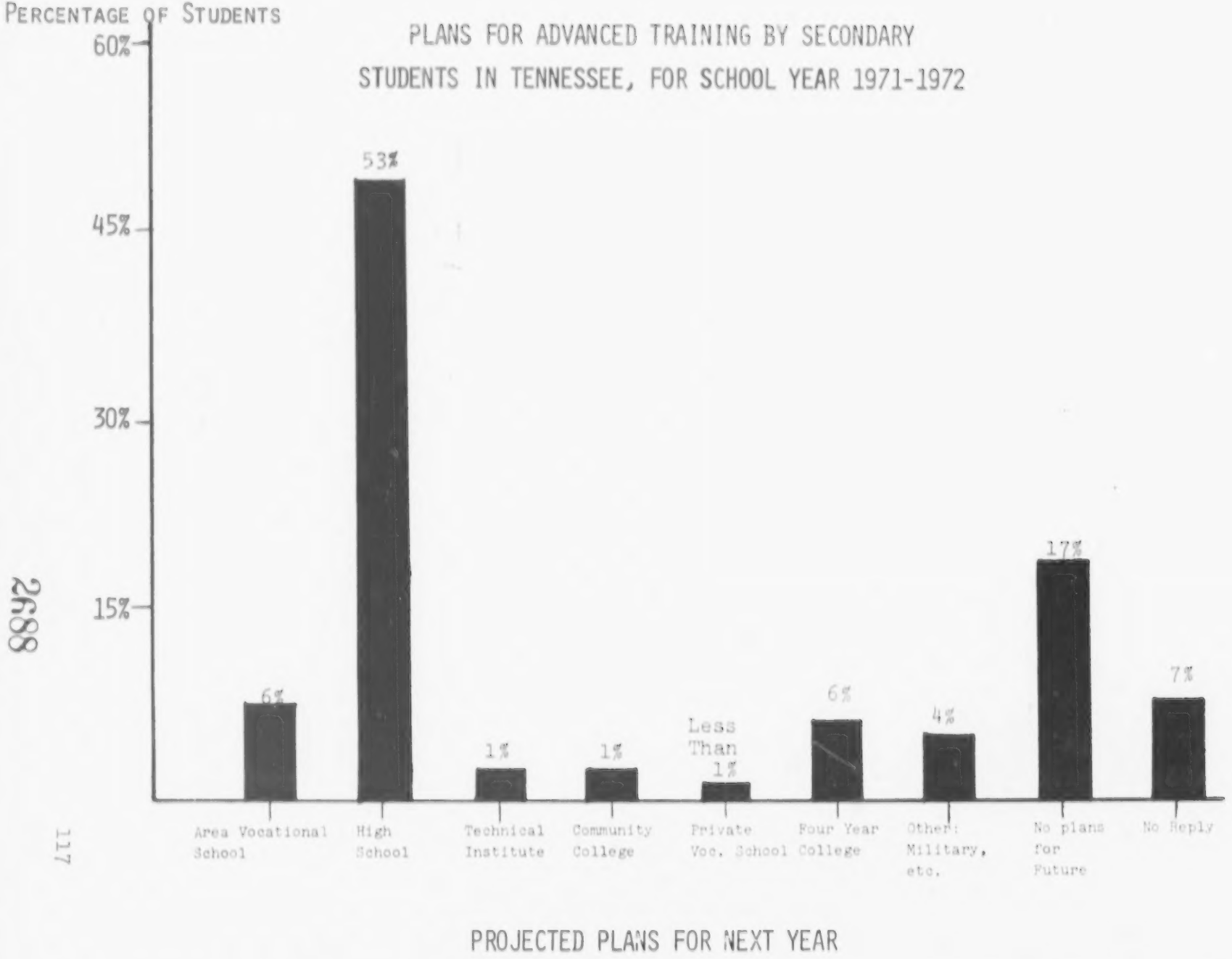

STATEWIDE TOTAL VOCATIONAL COURSES OFFERED BY
SECONDARY SCHOOLS IN TENNESSEE, SCHOOL YEAR 1971-1972
Number of Courses
600
500
400
300
200
100
194
132
61
432
73
207
31
553
Agriculture
Distributive Education
Health Occup.
Consumer Home Econ.
Occupational Home Econ.
Office Occupations
Technical Education
Trade & Industry Education

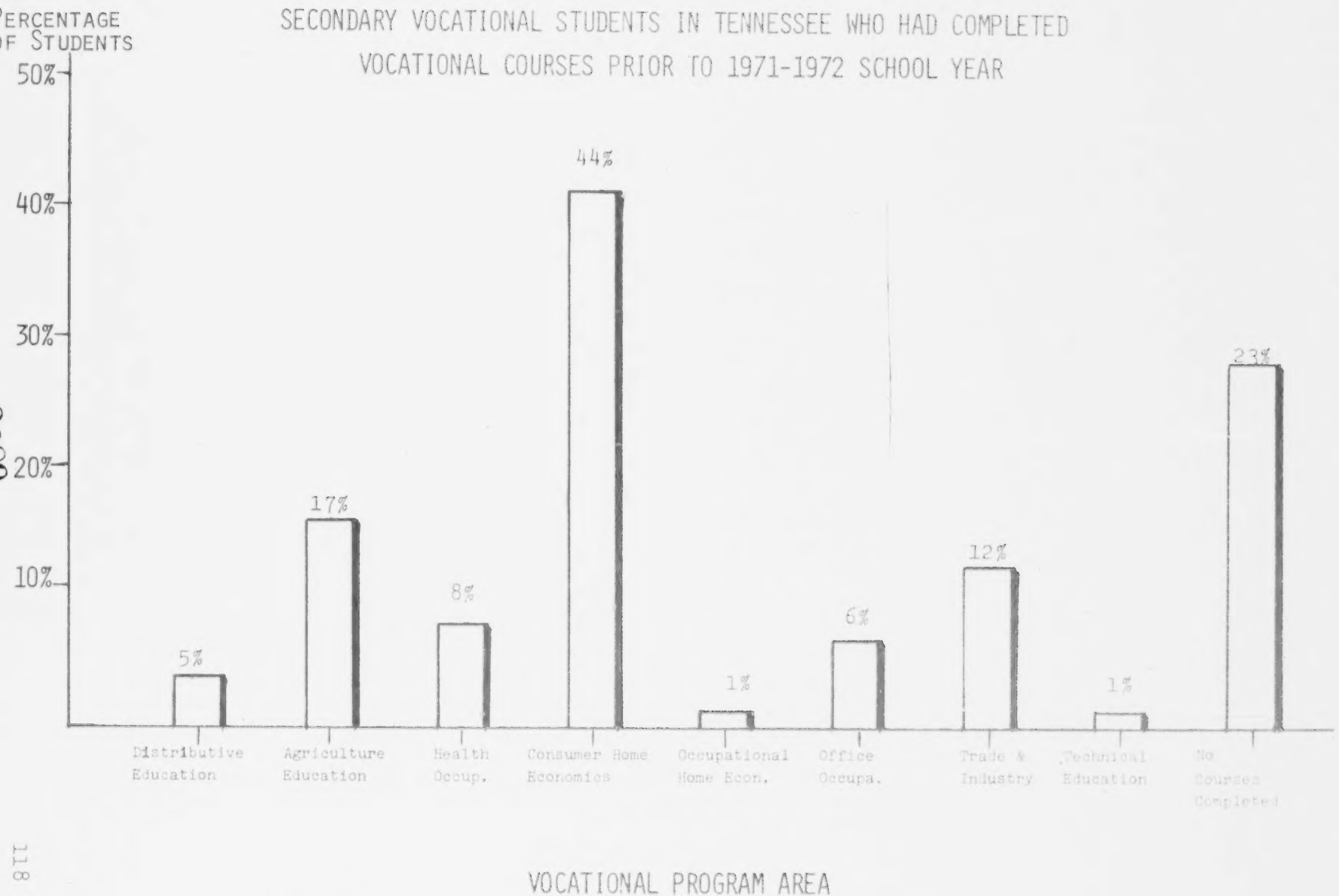
2686

DISTRIBUTION OF SECONDARY VOCATIONAL STUDENTS
BY PROGRAMS IN TENNESSEE, 1971-1972 SCHOOL YEAR



2688

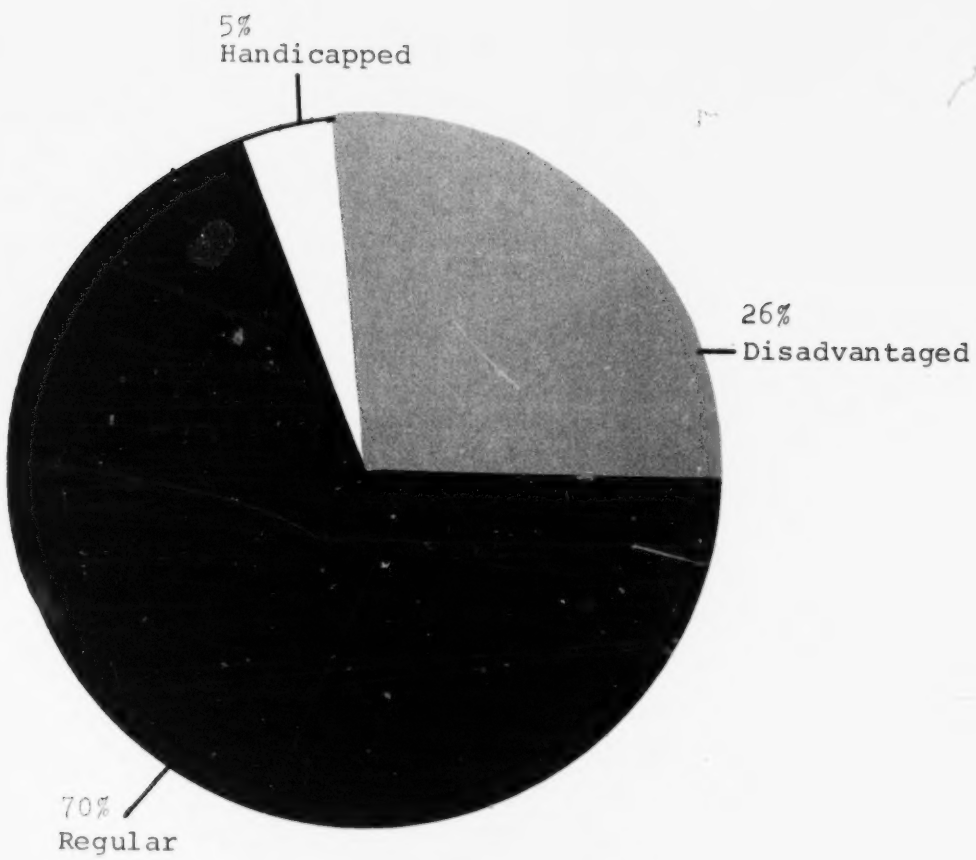

PERCENTAGE OF STUDENTS
PLANS FOR ADVANCED TRAINING BY SECONDARY STUDENTS IN TENNESSEE, FOR SCHOOL YEAR 1971-1972
60%
45%
30%
15%
6%
53%
1%
1%
Less Than 1%
6%
4%
17%
7%
Area Vocational School
High School
Technical Institute
Community College
Private Voc. School
Four Year College
Other: Military, etc.
No plans for Future
No Reply
PROJECTED PLANS FOR NEXT YEAR



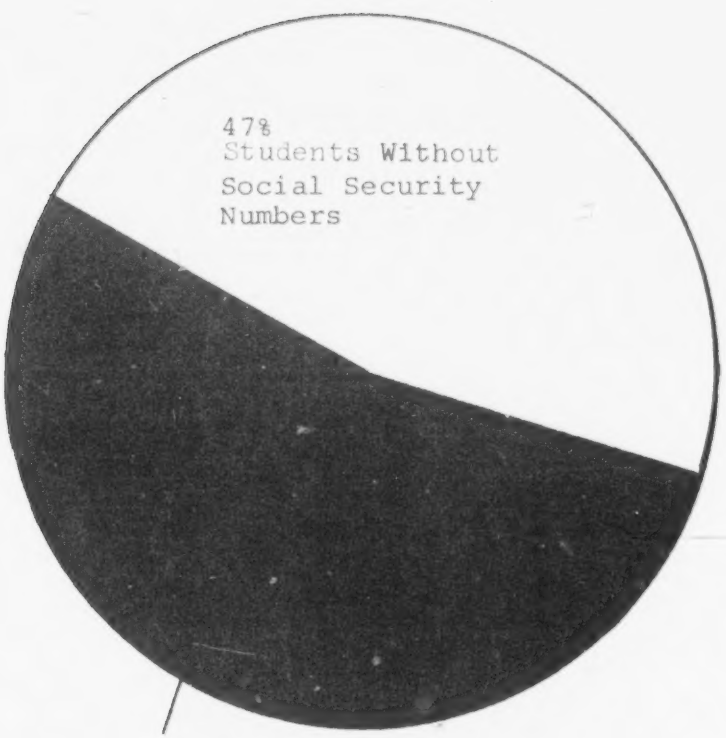
FILMED FROM BEST AVAILABLE COPY

2689

PERCENT OF SECONDARY VOCATIONAL STUDENTS
DISADVANTAGED OR HANDICAPPED

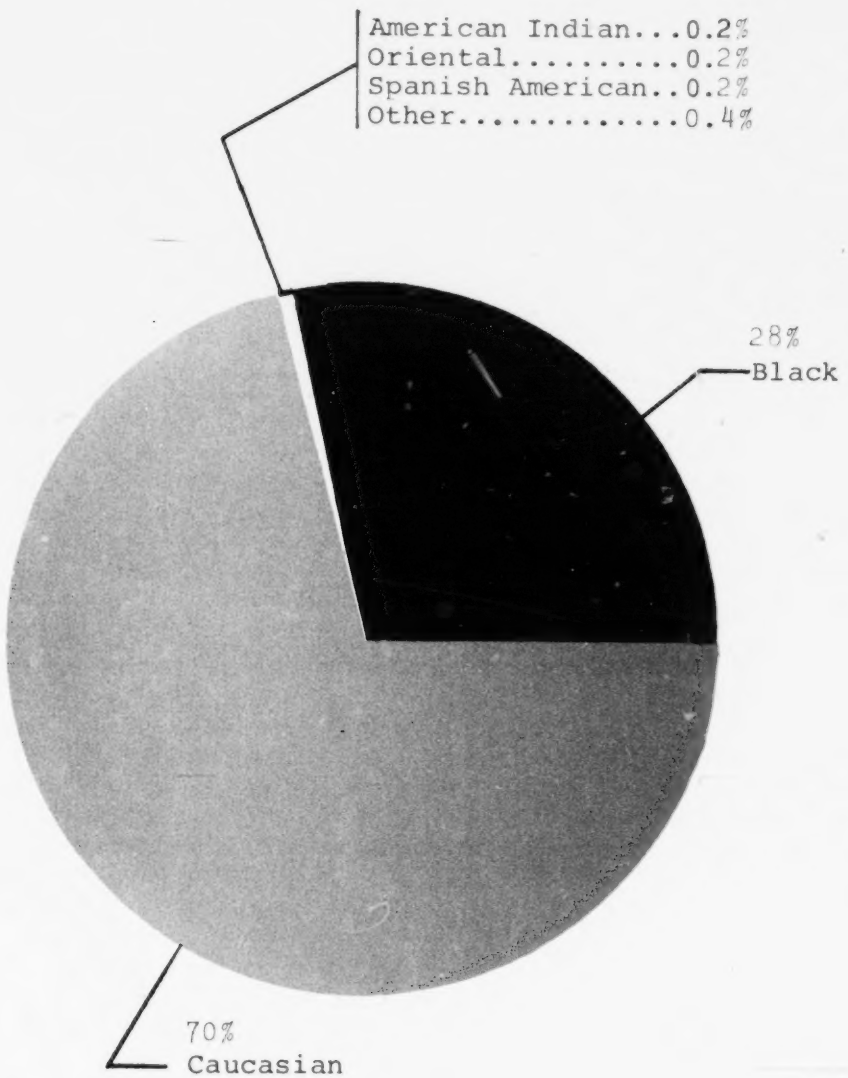


SECONDARY VOCATIONAL STUDENTS WITH AND WITHOUT SOCIAL SECURITY NUMBERS IN TENNESSEE, SCHOOL YEAR 1971-1972

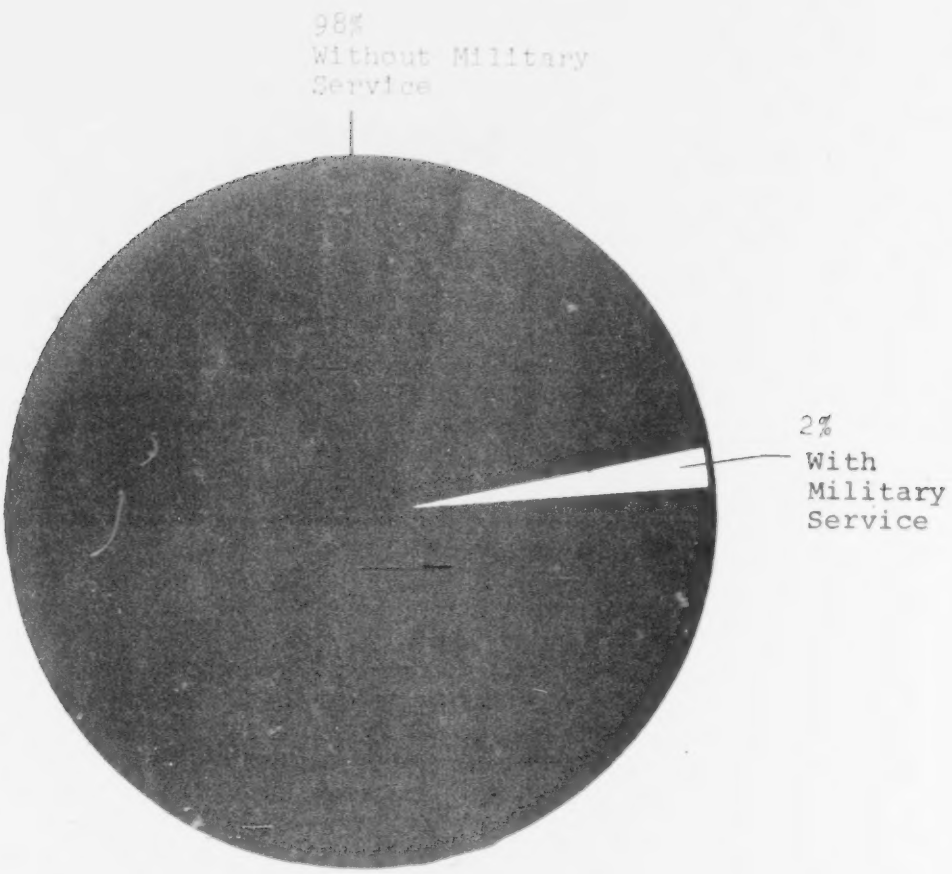


2691

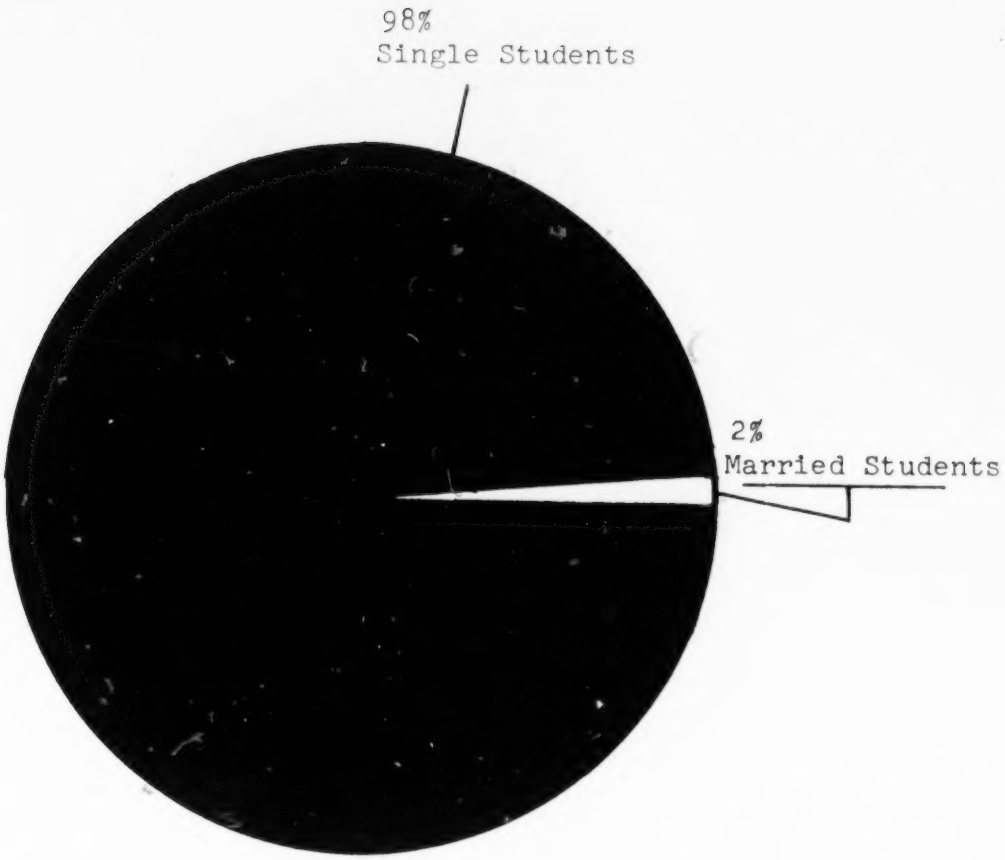
SECONDARY VOCATIONAL STUDENTS BY RACE IN TENNESSEE, SCHOOL YEAR 1971-1972



SECONDARY VOCATIONAL STUDENTS WHO ARE VETERANS, 1971-1972 SCHOOL YEAR



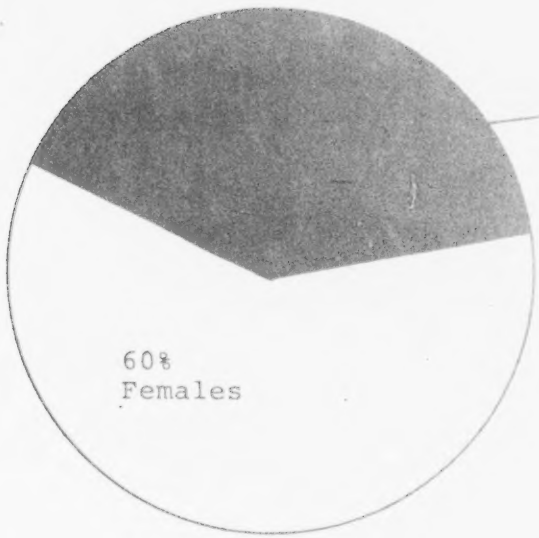
MARRIED SECONDARY VOCATIONAL STUDENTS
1971-1972 SCHOOL YEAR



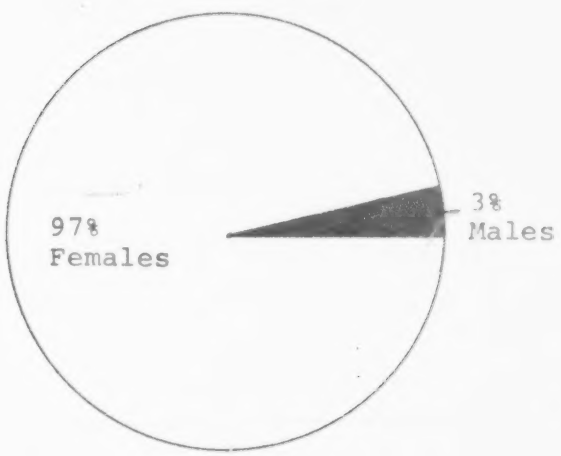
2694

SECONDARY VOCATIONAL STUDENTS BY SEX
1971-1972 SCHOOL YEAR

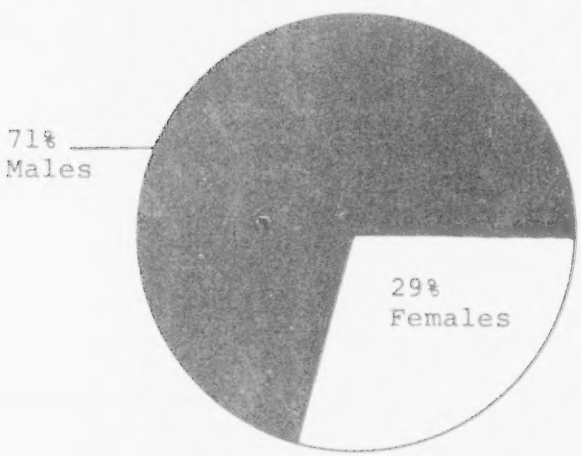
ALL PROGRAM AREAS



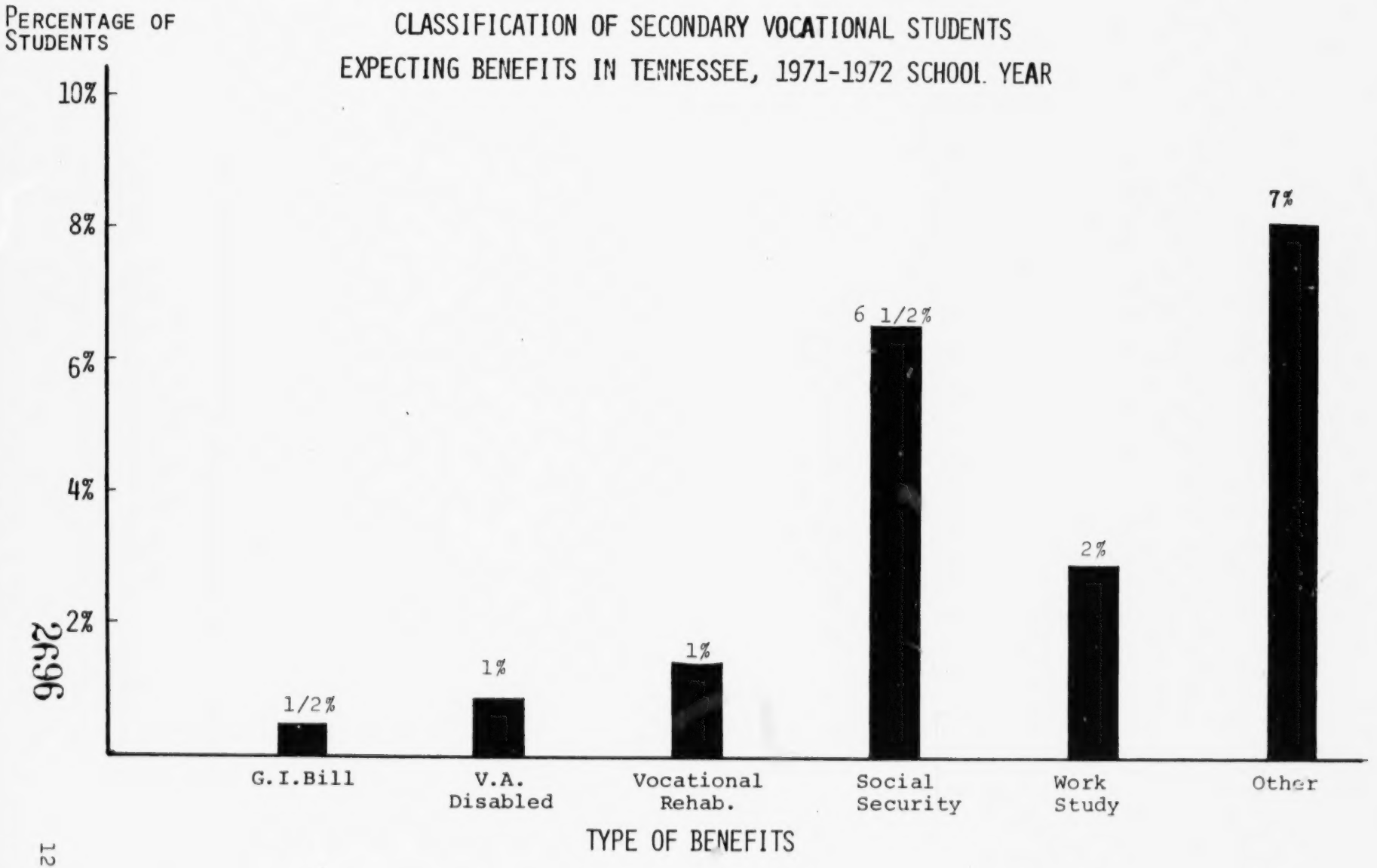
HOME ECONOMICS



ALL AREAS EXCEPT
HOME ECONOMICS



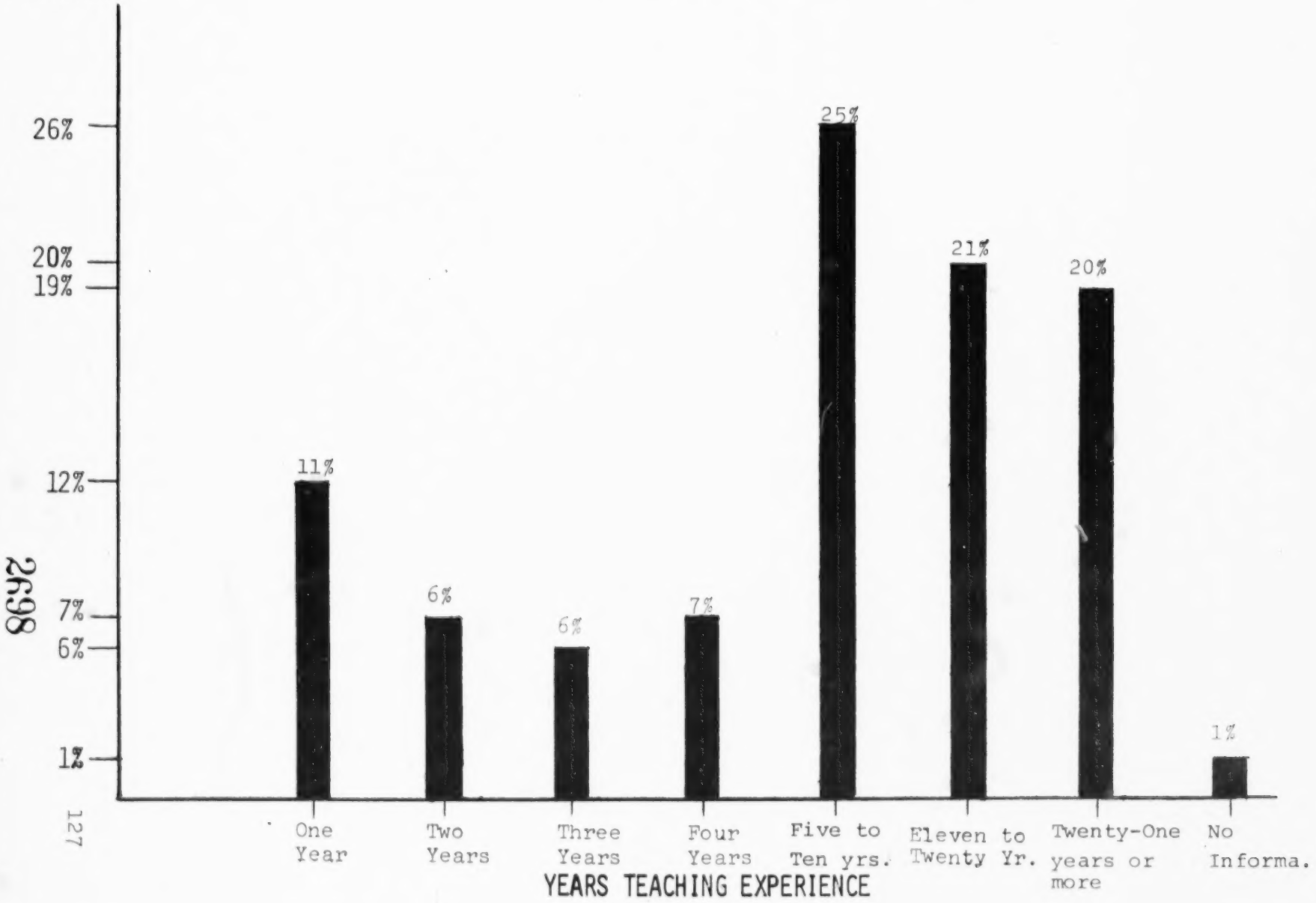
2695


PERCENTAGE OF STUDENTS
CLASSIFICATION OF SECONDARY VOCATIONAL STUDENTS
EXPECTING BENEFITS IN TENNESSEE, 1971-1972 SCHOOL YEAR
10%
8%
6%
4%
2%
1/2%
1%
1%
6 1/2%
2%
7%
G.I.Bill
V.A. Disabled
Vocational Rehab.
Social Security
Work Study
Other
TYPE OF BENEFITS

9692

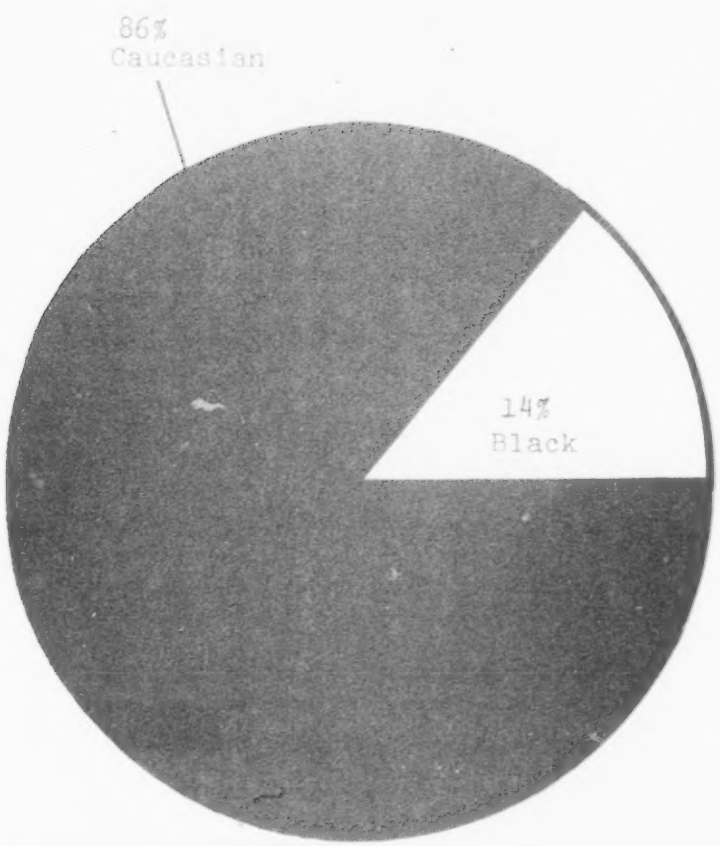
VOCATIONAL SECONDARY STUDENTS BY GRADE LEVEL IN TENNESSEE, SCHOOL YEAR 1971-1972

YEARS TEACHING SERVICE--SECONDARY VOCATIONAL TEACHERS AND AIDES IN TENNESSEE, 1971-1972 SCHOOL YEAR

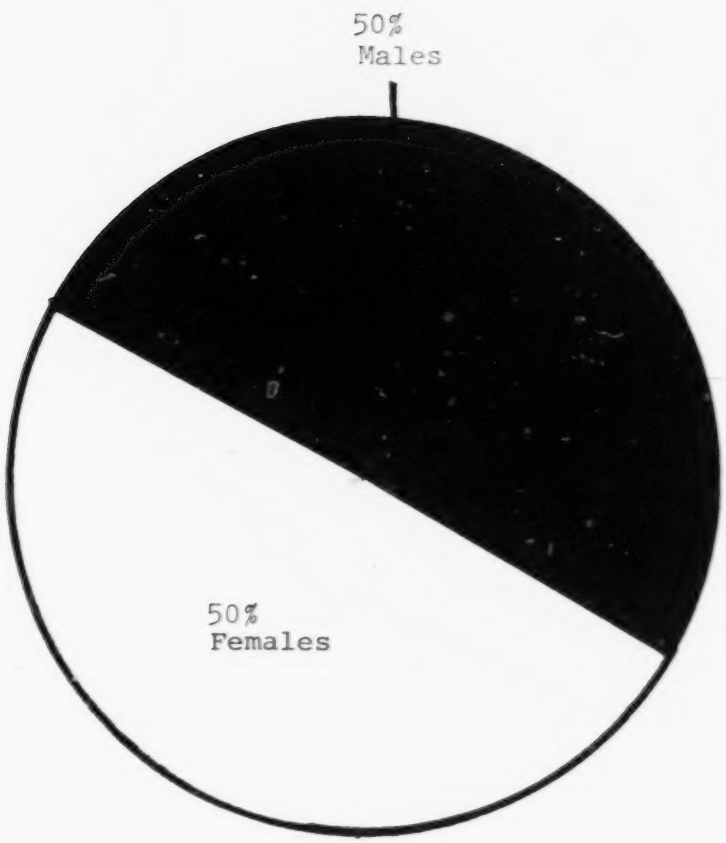


2698
127

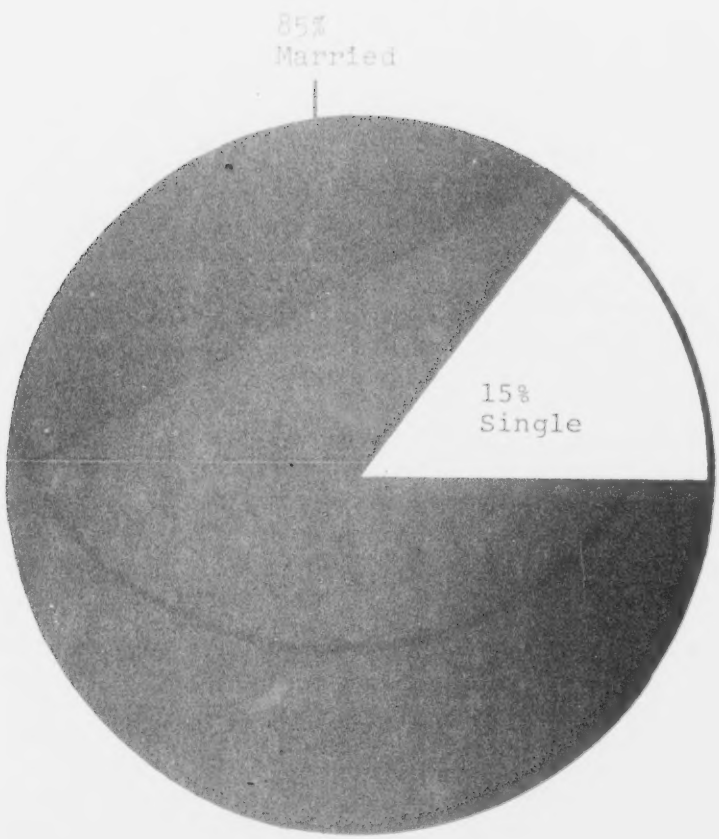
RACE OF SECONDARY VOCATIONAL TEACHERS
IN TENNESSEE, 1971-1972 SCHOOL YEAR



SECONDARY VOCATIONAL TEACHERS AND AIDES BY SEX
IN TENNESSEE, 1971-1972 SCHOOL YEAR

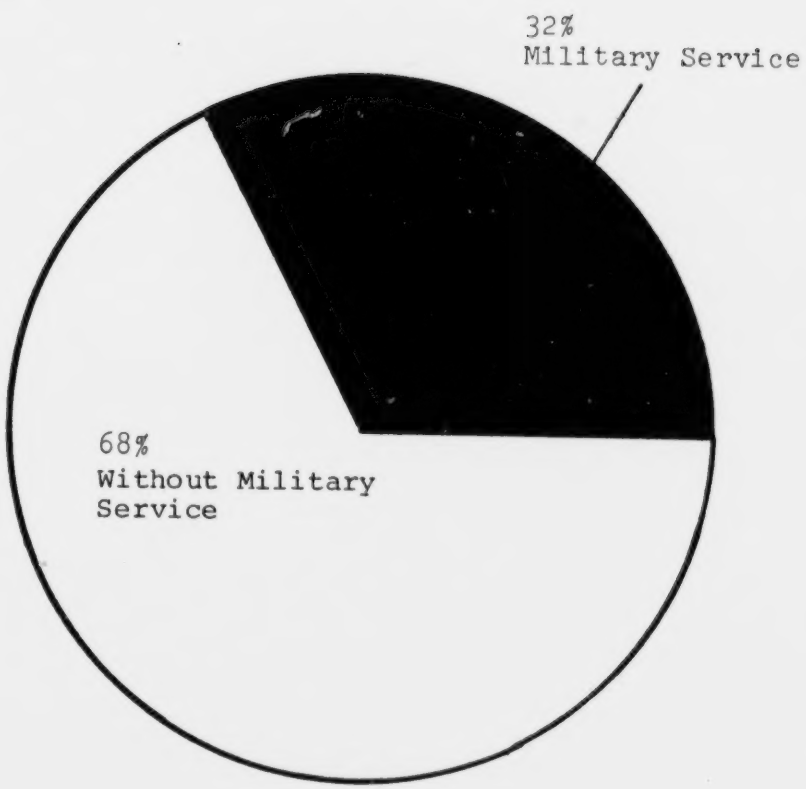


SECONDARY VOCATIONAL TEACHERS MARITAL STATUS
IN TENNESSEE, 1971-1972 SCHOOL YEAR



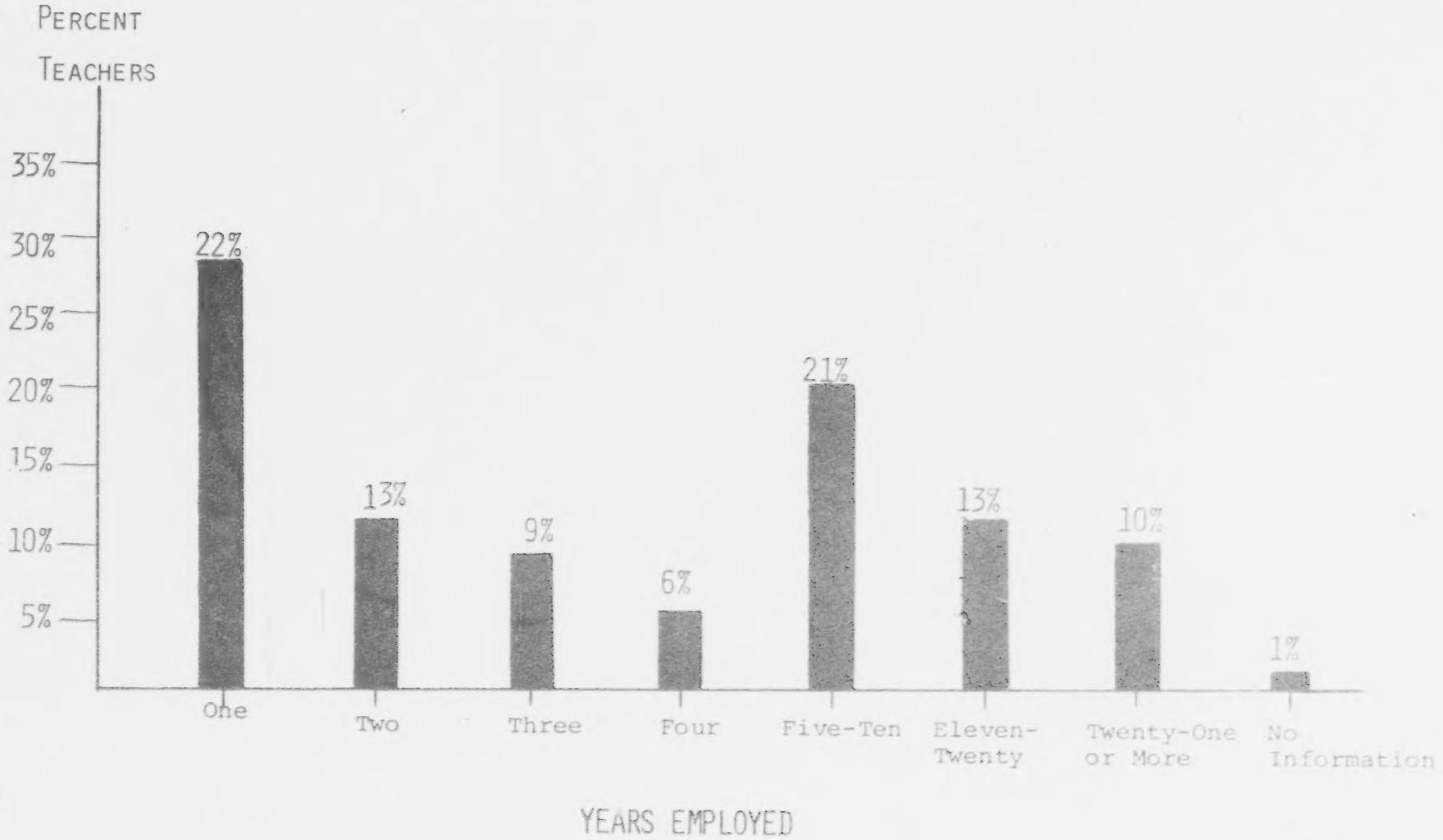
2701

SECONDARY VOCATIONAL TEACHERS
WITH MILITARY SERVICE, 1971-1972 SCHOOL YEAR

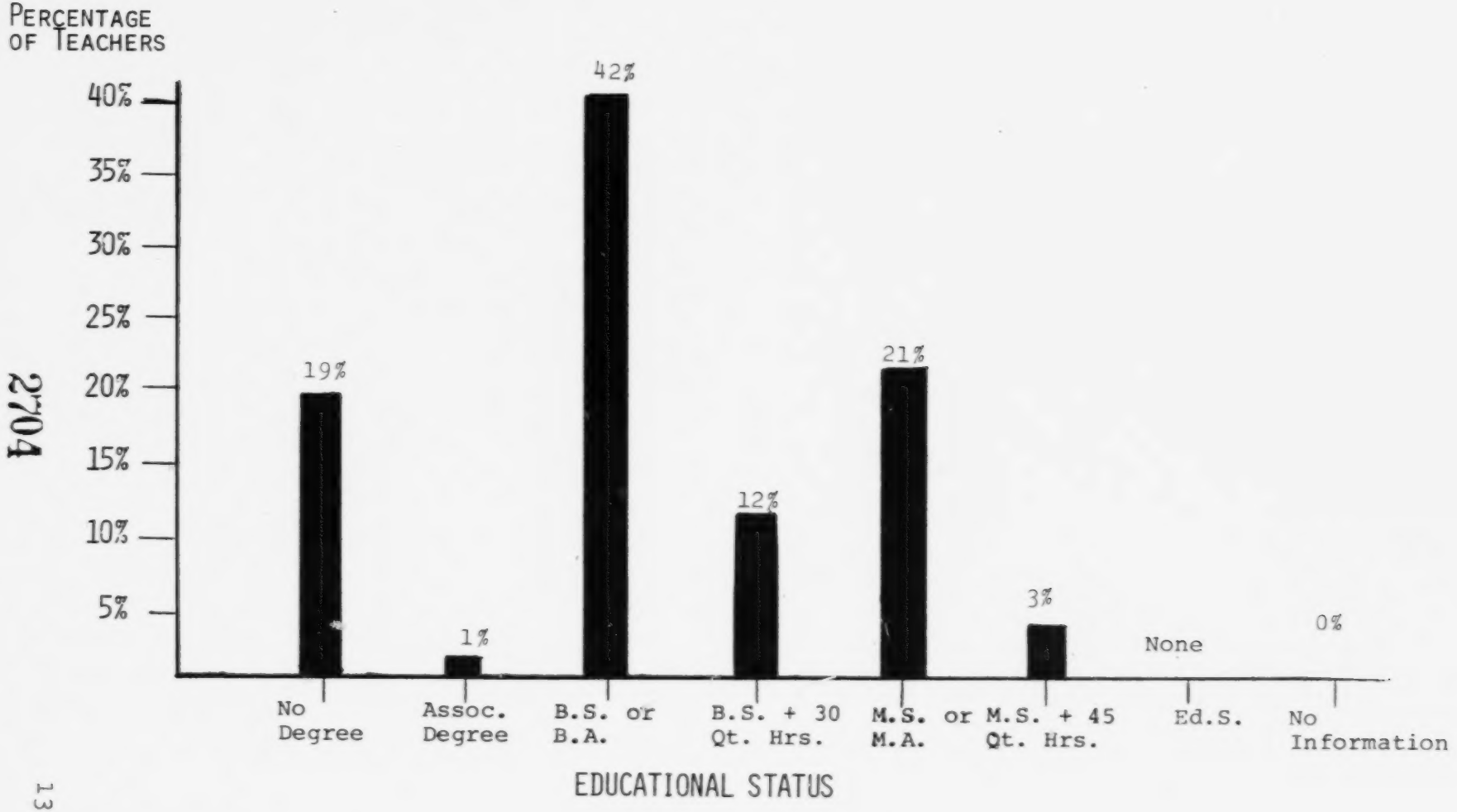


YEARS EMPLOYED IN PRESENT POSITION, TENNESSEE SECONDARY VOCATIONAL TEACHERS FOR SCHOOL YEAR 1971-1972

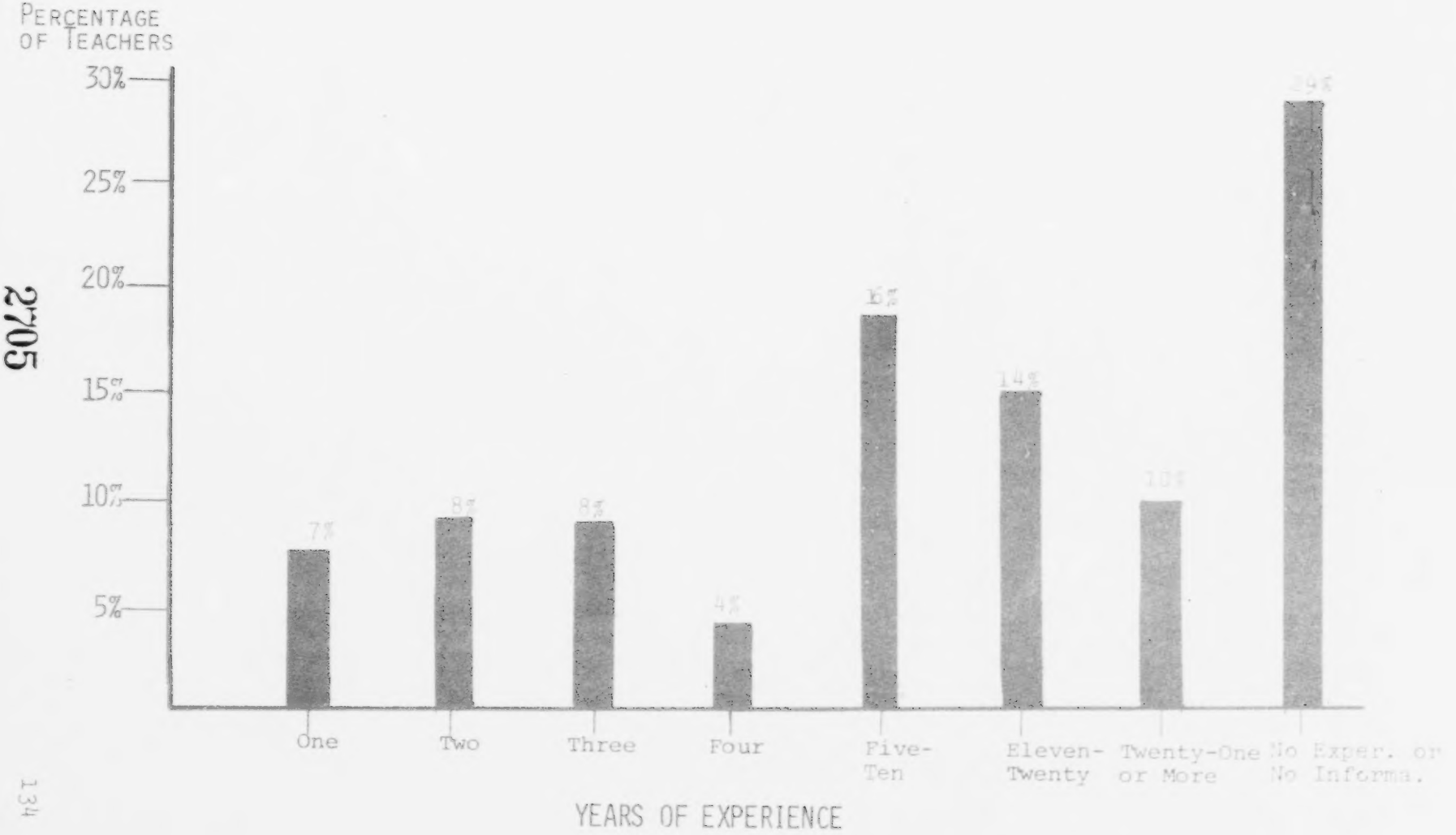
2703

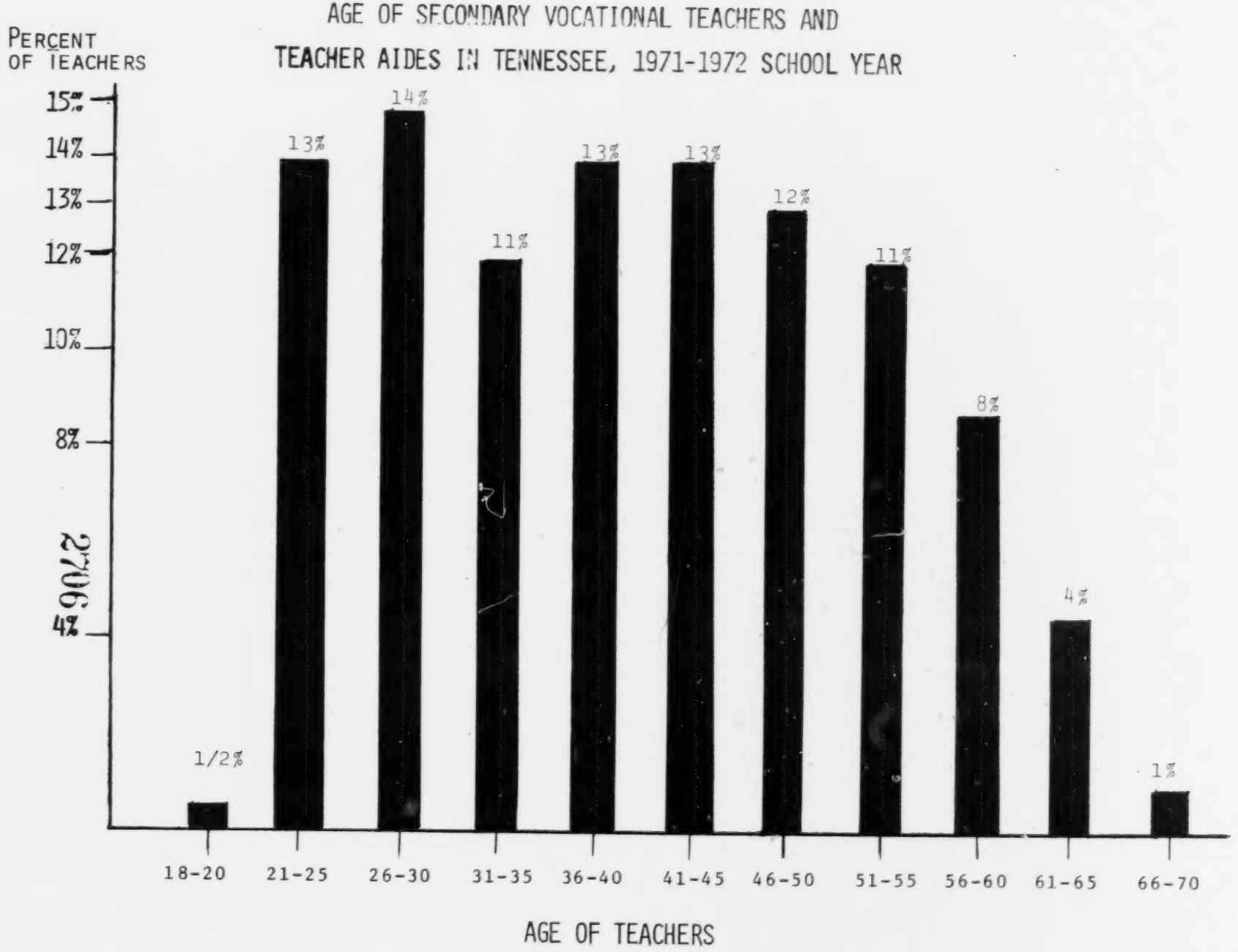


EDUCATIONAL STATUS OF SECONDARY VOCATIONAL TEACHERS IN TENNESSEE, 1971-1972 SCHOOL YEAR

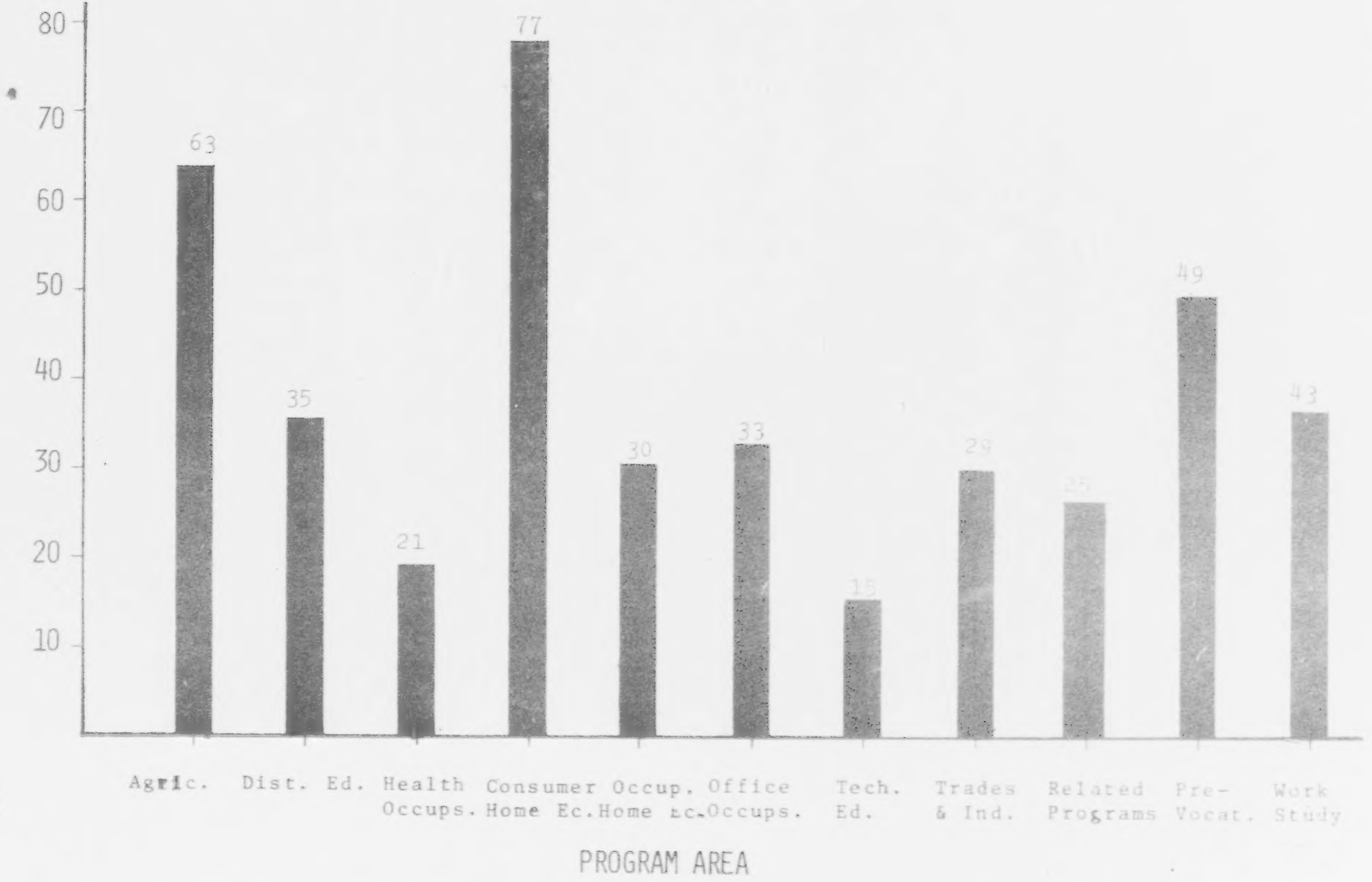


YEARS SERVICE IN INDUSTRY AND/OR BUSINESS, TENNESSEE SECONDARY VOCATIONAL TEACHERS AND AIDES FOR SCHOOL YEAR 1971-1972



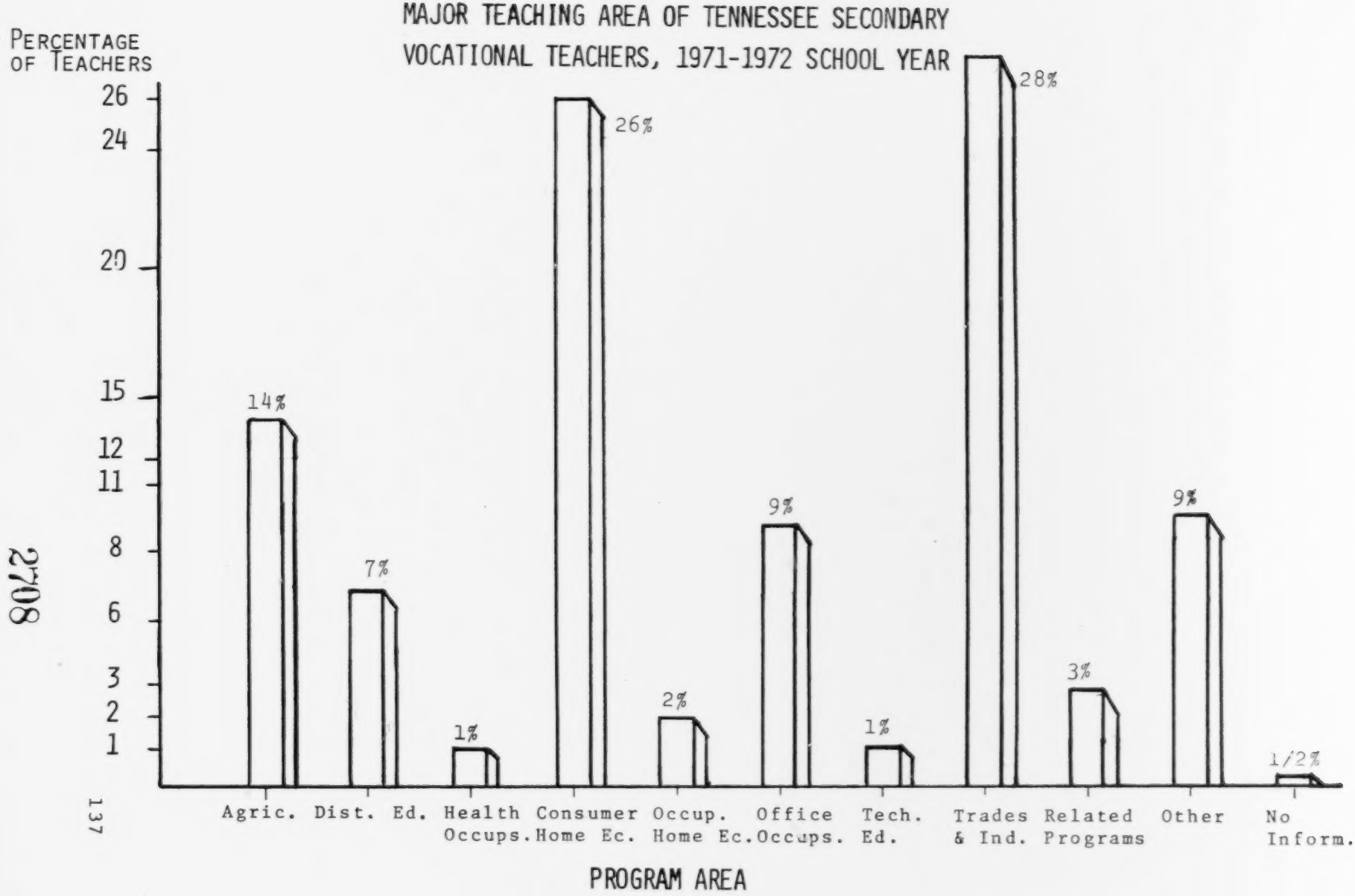

AGE OF SECONDARY VOCATIONAL TEACHERS AND
TEACHER AIDES IN TENNESSEE, 1971-1972 SCHOOL YEAR
PERCENT OF TEACHERS
15%
14%
13%
12%
10%
8%
4%
1/2%
13%
14%
11%
13%
13%
12%
11%
8%
4%
1%
18-20
21-25
26-30
31-35
36-40
41-45
46-50
51-55
56-60
61-65
66-70
AGE OF TEACHERS

AVERAGE SECONDARY TEACHING LOAD PER TEACHER
BY VOCATIONAL PROGRAM IN TENNESSEE, 1971-1972 SCHOOL YEAR



2042

8072


MAJOR TEACHING AREA OF TENNESSEE SECONDARY VOCATIONAL TEACHERS, 1971-1972 SCHOOL YEAR
PERCENTAGE OF TEACHERS
26
24
20
15
12
11
8
6
3
2
1
14%
7%
1%
26%
2%
9%
1%
28%
3%
9%
1/2%
Agric.
Dist. Ed.
Health Occups.
Consumer Home Ec.
Occup. Home Ec.
Office Occups.
Tech. Ed.
Trades & Ind.
Related Programs
Other
No Inform.
PROGRAM AREA

CONCLUDING REMARKS

The underlying mechanism that collected Tennessee's 1971-72 status report is a student and personnel information system based upon a programmed text format. This system utilizes an optical scan form to gather the basic information seen on the next page. This information makes an excellant nucleus for decision making. Other uses of this data should be considered. For instance, an automated directory for both vocational-technical education students and personnel is inherent in the design of the present data bank. An "indepth" personnel data bank would be an easily added feature of the already existing system. With the addition of administrators and counselors names, this system would provide the basis of a comprehensive automated mailing system to greatly facilitate communication among the different facets of vocational-technical education.

A greatly improved service could be made available by the use of an internally controlled computer facility with interlocking on-line facilities throughout the state. On-line capacity would be particularly helpful for updating files and keeping an accurate record of the cycling of irregular length vocational-technical courses. The on-line feature would automatically improve the accuracy of the reporting system by early and uniform notification of newly organized vocational-technical classes.

SAMPLE CLASS ROSTER WITH NAMES OF STUDENTS AND TEACHERS DELETED

THE FOLLOWING IS A TABULATION OF INFORMATION ABOUT YOUR VOCATIONAL-TECHNICAL CLASSES
PLEASE CHECK THIS INFORMATION AND RETURN THIS SHEET
MISSING DATA OR DATA IN DOUBT WILL BE INDICATED BY AN 'X' DIRECTLY BELOW THE DATA PRINTOUT
PLEASE CHECK THESE ITEMS PARTICULARLY WELL

TEACHER	SOC.SEC.NO	ADDRESS			TITLE	ID#
	414508971	04904DARLINGTON CT	NASHVILLE	37211	TEACHER	202623

TYPE SCHOOL	USOE CODE	SERVICE	PROGRAM LEVEL	TYPE PROGRAM	SCHOOL
H.SCH	049900	DISTRI	SEC.	COOP.B	19950110 ANTIOCH HIGH SCHOOL

BIRTHDATE	SEX	MARITAL STATUS	VETERAN	MONTHS SERVED	DEGREES	RACE	YEARS EMPLOYED EDUCATION	YEARS EXPER. INDUSTRY	YEARS EMPLOYED PR.PUS.	CERTIFICATE EXPIRATION DATE	BASIS EMPLOY.
7 19 33	F	M	NO		MS	CAUCA.	11-20	3	5-10	79	11 MTHS

TIME ALLOTMENT	THIS COURSE	ADMINISTRATION	ACAD.COURSES	ANOTHER V.COURSE
	FULL			

PUPIL INFORMATION

ID#	NAME	SS. NO.	DATE ENROLD	BIRTH DATE	SX	M S	VET	GRADE	RACE	BENEFITS EXPECTED	PRIOR TRAINING	YR	PLANS ADVANCED TRAINING	USOE	TYPE SCHL	TYPE PROG	CLAS	ANO VOC CLA	R	D	H
026374		411020957	90771	110855	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026378		415322349	90771	102955	M	S	NO	11	CAUCA.	OTHER	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026343		410901659	90771	40653	F	S	NO	12	CAUCA.	NONE	DISTRI	1	NONE	040700	D	2DIS	NO	INF NO	1		
026336		413949037	90771	51754	M	S	NO	11	CAUCA.	SOC.SEC.	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026379		414903641	90771	71854	M	S	NO	11	A.IND.	OTHER	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026352		413949025	90771	111253	M	S	NO	12	CAUCA.	NONE	DISTRI	2	COM COLL	041900	D	2DIS	NO	INF NO	1		
026342		414902871	90771	92954	F	S	NO	12	CAUCA.	NONE	DISTRI	1	4-YR COL	040600	D	2DIS	NO	INF NO	1		
026357		000000000	90771	22555	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040600	D	2DIS	NO	INF NO	1		
026377		413985553	90771	73155	M	S	NO	11	CAUCA.	OTHER	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026339		410962371	90771	82855	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026376		415920741	90771	41653	F	S	NO	12	CAUCA.	NONE	DISTRI	1	4-YR COL	040800	D	2DIS	NO	INF NO	1		
026382		415924713	90771	102754	M	S	NO	12	CAUCA.	NONE	DISTRI	2	4-YR COL	040700	D	2DIS	NO	INF NO	1		
026361		412966121	90771	102155	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026359		413926631	90771	60454	M	S	NO	12	CAUCA.	WK STUDY	DISTRI	2	TECH IN.	041600	D	2DIS	NO	INF NO	1		
026362		413945380	90771	20354	M	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040600	D	2DIS	NO	INF NO	1		
026340		300528849	90771	60953	M	S	NO	12	CAUCA.	NONE	DISTRI	1	4-YR COL	041500	D	2DIS	NO	INF NO	1		
026358		415922854	90771	60255	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040700	D	2DIS	NO	INF NO	1		
026348		415983998	90771	10955	F	S	NO	12	CAUCA.	NONE	DISTRI	1	OTHER	040399	D	2DIS	NO	INF NO	1		
026354		413926294	90771	110654	M	M	NO	12	CAUCA.	NONE	DISTRI	2	NONE	041900	D	2DIS	NO	INF NO	1		
026347		411020342	90771	121954	F	S	NO	12	CAUCA.	NONE	DISTRI	1	NONE	040200	D	2DIS	NO	INF NO	1		
026356		412762180	90771	62254	M	S	NO	12	CAUCA.	NONE	DISTRI AGRIC	1 3	OTHER	179964	D	2DIS	NO	INF YES	1		
026337		412968648	90771	70754	F	S	NO	12	CAUCA.	NONE	DISTRI	1	NONE	041500	D	2DIS	NO	INF NO	1		
026339		413948558	90771	110954	F	S	NO	12	CAUCA.	NONE	DISTRI	1	COM COLL	040700	D	2DIS	NO	INF NO	1		
026381		414903073	90771	90454	M	S	NO	12	CAUCA.	WK STUDY	DISTRI	1	A.VOC.SC	040800	D	2DIS	NO	INF NO	1		
026355		414900186	90771	82454	M	S	NO	12	CAUCA.	NONE	DISTRI	1	COM COLL	041700	D	2DIS	NO	INF NO	1		
026334		415922506	90771	81855	F	S	NO	11	CAUCA.	NONE	DISTRI	1	NONE	040800	D	2DIS	NO	INF NO	1		
026359		411020781	90771	90955	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	149900	D	2DIS	NO	INF NO	1		
026363		409946337	90771	82754	M	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040600	D	2DIS	NO	INF NO	1		
026333		408982195	90771	120755	F	M	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026380		413924615	90771	32254	M	S	NO	12	CAUCA.	WK STUDY	DISTRI	1	A.VOC.SC	041500	D	2DIS	NO	INF NO	1		
026375		410964326	90771	110754	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026349		402882790	90771	41655	F	S	NO	12	CAUCA.	WK STUDY	DISTRI	1	TECH IN.	040800	D	2DIS	NO	INF NO	1		
026351		410964943	90771	21954	F	S	NO	12	CAUCA.	WK STUDY	DISTRI	2	COM COLL	040800	D	2DIS	NO	INF NO	1		
026346		409949269	90770	72154	F	S	NO	12	CAUCA.	WK STUDY	DISTRI	1	NONE	041500	D	2DIS	NO	INF NO	1		
025136		413923796	90771	31854	F	S	NO	11	CAUCA.	NONE	DISTRI	1	HIGH SCH	040800	D	2DIS	NO	INF NO	1		
026353		415903686	90771	102154	M	S	NO	12	CAUCA.	NONE	DISTRI	2	NONE	041600	D	2DIS	NO	INF NO	1		

TOTAL NUMBER OF PUPILS FOR THIS TEACHER = 36

2710

VT 017 732
A SURVEY: INNOVATIVE VOCATIONAL EDUCATION IN THE FARMINGTON VALLEY REGION.

CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION.; GRANBY BOARD OF EDUCATION, CONN.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - ND 88P.
DESCRIPTORS - *SCHOOL SURVEYS; HIGH SCHOOLS; STUDENT INTERESTS; STUDENT ATTITUDES; *VOCATIONAL EDUCATION; HOME ECONOMICS EDUCATION; *EDUCATIONAL PROGRAMS; INDUSTRIAL ARTS; MANPOWER NEEDS; *COOPERATIVE PLANNING; *SHARED SERVICES; STUDENT TRANSPORTATION; STUDENT ENROLLMENT

ABSTRACT - A SURVEY OF SEVEN HIGH SCHOOLS IN THE FARMINGTON VALLEY (CONNECTICUT) REGION WAS CONDUCTED TO INVESTIGATE THE POSSIBILITIES OF A MUTUAL EFFORT TOWARD IMPROVING THE EDUCATIONAL OPPORTUNITIES IN THE REGION. THE RESULTS OF THE SURVEY PROVIDE: (1) AN ANALYSIS OF THE STUDENT POPULATION, INCLUDING THEIR ATTITUDES, INTERESTS, AND DESIRES, (2) AN ANALYSIS OF THE EXISTING INDUSTRIAL ARTS AND HOME ECONOMICS PROGRAMS INCLUDING COURSE LENGTH, ENROLLMENT, MAXIMUM NUMBER OF STUDENT PER CLASS, AND AREA PER STUDENT IN LARGEST CLASS, (3) INFORMATION PERTAINING TO MANPOWER NEEDS FOR HEALTH SERVICES, METAL WORKING OCCUPATIONS, PRINTING INDUSTRY, DISTRIBUTIVE OCCUPATIONS, AND TECHNICAL JOBS, AND (4) COSTS AND FEASIBILITY OF TRANSPORTING STUDENTS TO AND FROM THE SCHOOLS IN THE REGION. SURVEY QUESTIONNAIRES, LETTERS, AND OTHER MATERIALS ARE APPENDED. (SB)

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A SURVEY:

INNOVATIVE VOCATIONAL EDUCATION

IN

THE FARMINGTON VALLEY REGION

GRANBY BOARD OF EDUCATION
GRANBY, CONNECTICUT

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INTRODUCTION

Seven high schools in the Farmington Valley are currently participating in a move toward more significance in vocational education and orientation in their systems. This move toward a more relevant approach to the changing nature of educational needs, is necessary and imaginative in light of the current concern for increasing the opportunities for education for the non-college oriented student.

In an attempt to capitalize on the relative short distances between the high schools, and the possibility of mutual cooperative use of the program facilities in vocational education, the Granby Board of Education, acting as agent for the seven towns contracted for a research grant from the Connecticut State Board of Education, to investigate the possibilities of a mutual effort toward improving the education opportunities in the region.

The successes of the survey were varying. In some cases, information was readily available, and lent itself easily to organization and presentation. In other instances,the material sought was obscured by local lack of investigation, or lack of relevance to a particular system. In all attempts, the survey team's efforts were facilitated by the project advisory board member in the high school, and counselors, teachers and administrators from the seven towns.

The information presented here is by no means complete. It represents a three month old scratch on the surface of innovative approaches to programs in vocational education in the region. The survey develops a perspective of the student population of the schools, their attitudes, interests, and desires; the existing facilities in the high schools for cooperative efforts in programs; and the current trends in employment in the region; in hope that this information will act as a springboard to further investigation and more meaningful programming.

The survey team is grateful to the many teachers, counselors, and administrators who helped make the many phases of the survey possible. To Mr. Bob Coniglione and his students, who prepared this information for publication and distribution, and special thanks to Mr. Philip C. Couchon, without whose guidance and support this survey could not have been accomplished.

PART -- I

ANALYSIS OF POPULATION

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POPULATION

A total of 5686 students attend the seven high schools of the Farmington Valley Survey Region, from grades nine through twelve. In an attempt to survey the general characteristics of the population the following procedures were used: survey the student population by use of a common interest vehicle, a questionnaire and compare the responses for an estimation of student attitude and need; investigate the State requirements for aid to disadvantaged and handicapped students and establish the applicability of existing populations to these laws; and investigate the post-secondary school students of the various towns and their relationship to the program in innovative vocational education.

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STUDENT POPULATION

QUESTIONNAIRE:

description

The questionnaire consisted of seventy-one questions of a multiple choice variety. Questions concerned basic data like age and grade, interest in school, and counseling awareness, as well as more variable information like attitudes toward occupational groups, exposure to the work field and relevance of school studies to intended career goals. The questionnaire also assessed the student attitude to new programs in certain vocational fields.

(see) Apndx I

objectives

Through use of the questionnaire, the survey team attempted to measure the ability of participating students to: set goals for themselves; evidence proper decision making; identify strongest interests, aptitudes and abilities; identify immediate and long-range values; establish personal career areas of interest, and relate them to personal aptitude; and identify potential employment possibilities. (These constructs are the tenets of a Client-Centered approach to vocational counseling similar to the Priorities Counseling Survey of Orange County, California.)

The survey instrument, used to view student opinion and attitude on a large proportion, was not designed to accomodate statistical validation. With this in mind, the questionnaire tentatively established student problems like: no direction or plans for the future; need for help in education or career planning; uncertainty in present course of study, or uncertainty about identifying aptitudes and abilities; need for help in course planning, decision-making, developing study skills or improving grades, and developing relations with meaningful career orientation.

procedures

Approximately twenty per cent of each high school population was to be surveyed. A student cross-section was to be established by the Survey advisory board member at the high school in conjunction with a department chairman, or a member of the guidance department . Directions to the coordinating high school faculty member were to cut across student population in academic groupings, distributing the questionnaires evenly among classes considered high-medium-or low. It was requested that the questionnaire be administered in a school department which serves the entire student population (i.e. English, Social Studies, if required, Freshmen Science etc.) to insure a relative degree of randomness to the population cross-section.

In most cases, a member of the survey team was present to administer the questionnaire to the class. In the instances which he could not be present, instructions were furnished with the clarification of reading bottlenecks.

(see)Apndx II

The questionnaire was composed of questions answerable by choosing one of a number of selections. Since computer facilities were available the survey questions were answered by marking the appropriate section on the computer card.

Students were instructed to indicate a code for their high school (Avon-01, Bloomfield-02, etc.) in order to identify the group they took the survey with. This was the only identification they were to make on the card. Students were insured that their answers would be confidential.

Since the survey was not a controlled test questions were received and clarification of procedures and other troubles and misunderstandings were readily answered. Students considered "mentally handicapped" also participated in the survey under the direction of their class teacher. Cards for these students were reviewed with teachers for estimation of interpretation and validity. In most cases this information was too incomplete to be useful and was not included in the survey sample.

Students were allowed as much time as was needed to complete the questionnaire. With a few exceptions, students were able to finish the questionnaire in 40 minutes.

At the end of the survey period students were requested to give verbal impressions of questionnaire, and make any suggestions they might have.

Results of the questionnaire were computed on the basis of a simple per centage of number of respondees to a particular question, divided by number of participants with respect to grade and sex. The comprehensive report of findings follows, with a summary of total population attitudes and responses.

evaluation

The results of the student survey questionnaire demonstrated a significant dichotomy to the use of the information gathered. As a research vehicle the results are not statistically valid. The questionnaire itself, was at points, difficult for some groups to grasp; not comprehensive, that is, it did not include more than a few possible selections for each of the many general questions; it was not a controlled instrument (test administrators were requested to facilitate understanding with feedback to student questions); and in some cases, as a result of a misunderstanding over the use of the computer answer cards by students and survey team, some responses were invalidated. The most important consideration to make in light of these deficiencies is that no statistically valid predictions can be made concerning the student population surveyed.

In all, fifteen per cent of the seven school populations were surveyed.

In contrast to the questionability of the statistical significance of the survey vehicle, the information-gathering function it served was greatly beneficial. As an attitude and preference analysis, it demonstrated a very significant look at the student populations of the seven high schools. The fact that of 865 students surveyed there is an even distribution of boys and girls, and an almost equal division of grade levels, (11th grade was high with 32%), shows a consistent survey base. The variance in the choice of favorite courses (Question #6), and the estimations of personal preparation for the World of Work, (Question #26) indicates a surprisingly valid cross section. Two-thirds of the student body had some contact with vocational courses and at least half had worked in the past year. These observations also lend legitimacy to the cross section. The preferred motive for choice of a first job was the availability of good experience, and half the students thought the courses they were taking in the high school would help them in their chosen career. Well over half of the students are disposed to work experience programs and would also participate in courses in an innovative vocationally-oriented program.

When considering the 865 students surveyed, the number and characteristics of students of these students alone, without making a projection to the entire student body, would certainly accomodate the innovative approach to vocational education proposed.

QUESTIONNAIRE RESULTS AND SUMMARY

The following information was calculated on the basis of computer compiled results for a population of 865 students. The information presented is based on an analysis of student response by grade and sex. Other information available is the calculation of student response for each town participating in the survey, and total male/female responses to all questions.

POPULATION QUESTIONNAIRE

SUMMARY:

Eight hundred and sixty-five students from seven high schools in the Farmington Valley region participated in the survey. Of these 865, four hundred and thirty-two were boys, and four hundred and thirty-three were girls. Twenty-two per cent of the 865 were in the ninth grade; twenty-six per cent of the 865 were in the tenth grade; thirty-two per cent were in the eleventh grade; and twenty per cent were in the twelfth grade. The greatest number of students were in the age group of fifteen, sixteen, and seventeen. Ages and grades were directly proportional.

Activity in school-sponsored programs is about evenly divided with forty-seven per cent considering themselves active, twenty-four per cent not active, and twenty-four per cent not having enough time to participate.

The percentage of students who have worked in business or industry is slightly positive with fifty-three per cent of the students indicating that they had worked in this capacity during this past year as compared to the forty-four per cent of the students who indicated that they had had no experience.

The greatest interest in a single course group offered in school was shown to be in the field of Humanities and Social Studies which accounted for thirty-one per cent of the total. Science studies rated second accounting for twenty-five per cent of the total. Of the remaining vocational skill areas offered the most popular course study was indicated as Industrial Arts and Skills accounting for eighteen per cent of the total.

Seventy-eight per cent of the students are taking a course in their favorite field of study. Almost half (49%) indicated that the course they are taking in their favorite course group will help them in their future career. Three quarters (73%) of the students would like to see more new and advanced courses in their favorite group.

One third (33%) of the students had never taken an Industrial Arts or a Home Economics course .... While twenty-two per cent of the students had taken one course in these areas, only fifteen per cent had completed three or more courses.

Over half the students (57%) had discussed their educational plans with a counselor. More than one third (37%) felt that their counselor was able to spend enough time with them and less than one third (29%) felt that their counselor could not.

Seventy per cent of the students indicated they had chosen their own courses this year. Fourteen per cent of the students were aided by parents in making their course selections and nine per cent were aided by counselors.

Seventy percent of the students had not visited a business or industry in their home town area with the intent of viewing possible jobs and occupations during the past year.

Fifty-two per cent of the responses indicated an awareness of representatives from businesses and industries visiting the school to discuss job opportunities and training requirements. Twenty per cent was unaware of these visitations. Twenty-six per cent of the students were uncertain if representatives had been at their school.

Forty-six per cent responded that "career days" and job discussions were beneficial, while thirty-two per cent of the students thought the sessions left something to be desired.

One third (33%) of the students thought that it was better to be a specialist in a particular occupation, while only four per cent indicated it better to be a generalist. Another third indicated a person should begin to specialize in high school; thirty-five per cent indicated this was appropriate during college. Fifteen per cent indicated that specialization was called for while working "on the job".

A preference (52%) for public contact careers was indictated by the responses. Twenty-four per cent prefered a mechanically-oriented occupation. Twenty-one per cent indicated no preference.

Thirty-four per cent chose "an opportunity to gain experience and learn" as the most important reason for choosing a first job. Nineteen per cent chose friendly co-workers and surroundings as of primary importance. Sixteen per cent chose the "ability to succeed in the job and satisfy oneself".

Eighty-six per cent of the students refuse to accept college as the only way to a secure future.

Over half (59%) considered it important to have both language and math skills, while twenty-five per cent favored language skills as most beneficial and thirteen per cent favored a math and science background.

Fourteen per cent of the students indicated that a course taken in high school in a skilled trade or occupation could lead to a secure, high paying position, while seventy-three per cent responded that this was possible but depended on the individual and his experience.

Thirty-one per cent of the students thought that most adults are not happy in their chosen professions; forty per cent were unsure. Ninety-four per cent considered this an important factor in deciding on a career.

Fifty-three per cent thought they would need three or four more years of study (either apprenticeship or college) to prepare them for their chosen careers. Twenty per cent indicated a need for only one or two more years of training. Nine per cent expressed a desire to be prepared on graduation from high school.

Twenty-three per cent of the students indicated "a growing need for people with ability and training in this career" as the most probable reason for choosing a career. Thirty-one per cent indicated that their reason for choosing a career was one other than the reasons listed.

The following occupational choices were the most frequently

chosen as possible careers; Personal Health Care Services accounted for thirteen per cent of the responses, Education accounted for twelve per cent and Engineering accounted for ten per cent. Twenty-five per cent were unable to chose a career from the list provided.

The three most popular courses in the list of possible future offerings were Auto Maintenance (7%), Aeronautics (7%), and Secretarial and Office Practices (7%). Thirty-four per cent felt there was another possible course not mentioned which would be beneficial in their careers.

The installation of short, non-credit "mini-skill" courses was mentioned as a possibility. Interest in this was expressed by the students in the form of checking either "interested" or "not interested" after each possible course. Forty-one per cent of the students expressed an interest in a course in First Aid. Twenty-three per cent were interested in a course in Firefighting. A Photography course drew a forty-two per cent interest response. Twenty-four per cent were interested in a Needlecraft course. Eighteen per cent were interested in a Rug-braiding and Hooking course. A course dealing with the Basics of Police Practices was of interest to twenty-two per cent of the students. The last possible course offering dealing with Consumer Interests drew a thirty-nine per cent interest response.

Students who had made future plans for education were instructed to answer three questions and the responses were the following. Twenty-seven per cent thought they have had some experience which relates to their chosen occupation. Twenty-three per cent know of industries in their home town area where they could gain experience. Over one half (58%) would consider working in their chosen occupations on a part-time basis after school for pay and credit.

Fifty-three per cent of the students indicated that they would take an industry-vocation oriented course in place of Social Studies, Math or an elective. Forty-one per cent of the students indicated they would take an extra course on top of their regular credit load that focused on this area.

SURVEY QUESTIONNAIRE RESULTS

1. Number of boys and girls responding:

Boys--- 432 Girls--- 433

2. Ages of boys and girls:

	9		10		11		12	
	M	F	M	F	M	F	M	F
14								
15								
16	no significant variance of ages							
17								
18+								

3. Number of boys and girls in each grade surveyed:

9		10		11		12	
M	F	M	F	M	F	M	F
101	92	109	118	131	150	91	74

4. Percentage of boys and girls who are active, inactive or not interested in school activities, by grade:

	9		10		11		12	
	M	F	M	F	M	F	M	F
active	56%	55%	39%	45%	22%	42%	52%	39%
not active, not interested	23%	23%	32%	23%	28%	27%	18%	31%
not enough time	16%	19%	27%	21%	1%	27%	27%	26%

5. Percentage of boys and girls by grade who have or have not been employed in business or industry in the past year:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	39%	14%	48%	26%	73%	67%	79%	76%
no	57%	77%	50%	63%	27%	31%	18%	22%

6. Percentage of boys and girls who prefer a specific course group:

	9		10		11		12	
	M	F	M	F	M	F	M	F
Humanities Social Sts.	21%	32%	28%	36%	33%	30%	33%	41%
Industrial Arts	34%	5%	35%	5%	30%	6%	23%	3%
Business Studies	3%	12%	6%	17%	2%	9%	0	9%
Science Studies	35%	23%	28%	13%	30%	21%	36%	18%
Home Econ. Art	3%	25%	1%	25%	2%	29%	3%	24%

7. Percentage of boys and girls who are presently taking a course in their preferred group:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	77%	63%	82%	76%	82%	80%	86%	77%
no	18%	30%	15%	18%	13%	19%	12%	19%

11. Percentage of students who have discussed their educational plans with a counselor:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	33%	34%	50%	48%	66%	73%	72%	74%
no	59%	63%	48%	45%	34%	23%	24%	19%

12. Percentage of students indicating the most influential person helping in course selection for them:

	9		10		11		12	
	M	F	M	F	M	F	M	F
relative	24%	22%	16%	15%	13%	15%	4%	4%
close friend	3%	1%	4%	3%	2%	3%	1%	0%
counselor	6%	8%	10%	8%	13%	11%	8%	8%
teacher	2%	0%	0%	2%	1%	1%	1%	0%
decided for self	56%	67%	68%	67%	71%	69%	85%	85%

13. Percentage of students who responded as to whether or not they felt their counselor was able to spend enough time with them to help them with their future plans:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	28%	38%	32%	37%	43%	37%	45%	35%
no	16%	27%	28%	27%	25%	37%	35%	42%
don't know	52%	33%	37%	32%	30%	23%	18%	20%

14. Percentage of students who have visited business or industry in order to view jobs and occupations in the past year:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	21%	13%	29%	23%	27%	41%	30%	34%
no	76%	85%	69%	74%	70%	57%	68%	64%

15. Percentage of students who have knowledge of visits from representatives of business and industry to their school:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	53%	67%	33%	57%	46%	55%	45%	64%
no	20%	11%	31%	18%	22%	17%	27%	5%
not sure	23%	21%	34%	22%	28%	27%	26%	26%

16. Percentage of students who have an opinion concerning "career days" or group discussions about jobs:

	9		10		11		12	
	M	F	M	F	M	F	M	F
good	53%	58%	57%	41%	43%	39%	42%	43%
no good	8%	1%	11%	9%	9%	7%	8%	12%
done better	28%	30%	20%	41%	29%	39%	28%	36%
not interested	4%	7%	10%	5%	16%	11%	20%	5%

17. Percentage of students who view specialization or generalization to a job field:

	9		10		11		12	
	M	F	M	F	M	F	M	F
specialist better	29%	29%	39%	24%	38%	37%	35%	31%
generalist better	39%	36%	40%	42%	41%	35%	47%	45%
not sure	27%	33%	17%	28%	18%	24%	16%	22%

18. Percentage of students who have opinion as to when a person should specialize:

	9		10		11		12	
	M	F	M	F	M	F	M	F
high school	39	38	32	36	30	39	23	24
college	29	35	34	38	30	32	43	39
on the job	16	3	19	11	18	14	23	19
junior high	4	10	4	3	2	1	2	3
not sure	12	11	8	7	15	8	5	9

19. Percentage of students who feel a type of career would appeal to them:

	9		10		11		12	
	M	F	M	F	M	F	M	F
work with people	22	62	29	74	31	75	43	82
work with machines	47	10	38	5	39	9	38	4
no preference	28	25	29	19%	27	13	15	12

20. Percentage of students who have a preferred motive for choosing their first job:

	9		10		11		12	
	M	F	M	F	M	F	M	F
high pay	16	9	17	1	16	4	12	5
good experience	32	42	38	40	28	34	25	28
friendly co-workers	16	13	16	28	24	21	11	0
ability to succeed	34	33	26	30	29	37	45	46

21. Percentage of students who feel college is the "only" way to a happy secure future:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	16%	11%	12%	16%	9%	7%	14%	9%
no	82%	82%	85%	79%	89%	93%	85%	86%

22. Percentage of students who have an opinion about the development of personal skills and talents:

	9		10		11		12	
	M	F	M	F	M	F	M	F
important to speak, write well	8%	28%	12%	36%	14%	37%	22%	43%
understand science, math, mechanics	22%	8%	24%	6%	22%	4%	11%	4%
both are important	68%	61%	60%	53%	63%	54%	66%	49%

23. Percentage of students who feel high school specialization in skilled vocational areas could lead to good, high paying job:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	16%	14%	13%	14%	15%	14%	18%	9%
maybe	65%	76%	74%	74%	69%	74%	74%	69%
no	14%	4%	11%	9%	10%	9%	7%	12%

24. Percentage of students who feel that adults are happy in their chosen occupation:

	9		10		11		12	
	M	F	M	F	M	F	M	
yes	28%	24%	36%	27%	21%	19%	36%	11%
no	17%	23%	29%	24%	38%	38%	32%	42%
don't know	50%	48%	34%	42%	35%	38%	30%	42%

25. Percentage of students who feel importance for their future happiness in a future occupation of their choice:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	94%	96%	90%	97%	93%	97%	93%	95%
no	--	--	2%	--	--	1%	2%	--
does not matter	2%	0%	2%	0%	3%	0%	0%	1%
don't know	2%	1%	4%	0%	3%	1%	2%	0%

26. Percentage of student opinion about job preparation and the amount of time they will have to prepare for a career:

	9		10		11		12	
	M	F	M	F	M	F	M	F
high school	10%	12%	6%	11%	5%	14%	2%	11%
1 to 2 years	28%	11%	25%	14%	26%	22%	14%	10%
3 to 4 years	20%	32%	28%	42%	30%	31%	30%	34%
more than 4 years	25%	23%	18%	17%	17%	20%	37%	28%
don't know	14%	21%	22%	12%	19%	12%	15%	14%

27. Percentage of students who have indicated awareness of future job or career choice:

	9		10		11		12	
	M	F	M	F	M	F	M	F
growing need	21%	23%	17%	16%	21%	28%	26%	34%
parent's career	5%	4%	6%	1%	2%	2%	5%	0%
friend's career	6%	1%	4%	3%	8%	3%	6%	0%
like equipment in job	31%	16%	32%	19%	19%	8%	14%	18%
work needs to be done	4%	7%	10%	8%	7%	5%	3%	2%
opportunity for creativity	7%	17%	8%	14%	16%	17%	18%	12%
employment in home town	4%	1%	8%	1%	4%	1%	2%	0%
not made up mind as of yet	12%	16%	15%	12%	18%	11%	12%	5%
another reason not listed	30%	28%	20%	40%	30%	34%	23%	31%

29. Percentage of students' choice of occupational group:

		9		10		11		12	
		M	F	M	F	M	F	M	F
	agriculture	7%	12%	11%	6%	11%	8%	9%	2%
	building trades	12%	2%	16%	1%	8%	2%	9%	0%
	business etc.	5%	12%	7%	14%	13%	9%	7%	4%
	child care services	0%	6%	2%	3%	1%	7%	0%	8%
	communications	3%	1%	3%	2%	3%	3%	6%	6%
30.	education	2%	14%	8%	18%	8%	21%	10%	16%
	food services	5%	2%	4%	2%	4%	1%	1%	1%
	engineering	19%	2%	22%	1%	17%	1%	20%	1%
	government services	2%	2%	1%	0%	2%	2%	2%	1%
	homemaking services	0%	4%	0%	4%	0%	3%	0%	1%
31.	art	5%	11%	7%	14%	4%	11%	9%	5%
	industrial mkting.	2%	2%	3%	0%	3%	1%	2%	0%
	legal aid	6%	2%	8%	5%	7%	5%	8%	5%
	military services	1%	0%	7%	1%	5%	1%	5%	1%
	municipal services	3%	1%	2%	0%	3%	0%	2%	1%
32.	office management	3%	0%	5%	1%	7%	2%	3%	3%
	personal health care	8%	17%	6%	18%	4%	22%	9%	19%
	general services	1%	4%	4%	4%	2%	2%	1%	1%
	recreation service	3%	0%	5%	1%	1%	2%	2%	0%
	transportation	8%	1%	3%	1%	4%	1%	5%	0%

33. Percentage of students who could not choose an occupational group:

	9		10		11		12	
	M	F	M	F	M	F	M	F
could not find interest	10%	12%	10%	13%	10%	15%	5%	12%
plans do not fit any group	6%	6%	4%	0%	1%	1%	2%	9%
none of groups were interesting	1%	0%	0%	0%	0%	0%	1%	0%
haven't made up mind yet	7%	7%	10%	11%	9%	5%	3%	7%
no response	70%	71%	71%	71%	75%	75%	82%	77%

34. Percentage of students indicating choice "A" in listing of courses:

		9		10		11		12	
		M	F	M	F	M	F	M	F
Accounting	(34)	4%	1%	1%	8%	11%	6%	8%	3%
Aeronautics	(35)	12%	1%	13%	1%	11%	3%	14%	2%
Air Conditioning	(36)	2%	0%	5%	0%	3%	1%	4%	0%
Auto repair	(37)	14%	2%	15%	2%	14%	2%	8%	0%
Barbering, Hair Style	(38)	0%	3%	1%	3%	1%	3%	1%	1%
Carpentry, Construction	(39)	12%	0%	10%	0%	11%	3%	10%	0%
Commercial Art	(40)	3%	5%	7%	8%	4%	6%	3%	4%
Computor Programming	(41)	2%	3%	4%	4%	8%	6%	4%	4%
Dental Assistant	(42)	4%	3%	2%	1%	1%	5%	2%	0%
Instruments in Electr.	(43)	7%	1%	4%	0%	6%	1%	6%	1%
Electronics, Radio	(44)	5%	1%	9%	0%	7%	1%	10%	0%
Food Management	(45)	4%	4%	4%	1%	4%	4%	4%	3%
Materials Testing	(46)	4%	0%	6%	0%	3%	2%	2%	4%
Nurse's Aide, LPN	(47)	1%	16%	2%	9%	0%	10%	1%	11%
Oil burner service	(48)	2%	1%	4%	0%	0%	1%	3%	1%
Plumbing Tblshooting	(49)	1%	0%	3%	0%	2%	1%	0%	0%
Advanced graphics	(50)	3%	2%	0%	1%	4%	2%	3%	3%
Surveying	(51)	4%	1%	4%	2%	2%	1%	3%	0%
Secretarial, Office	(52)	1%	11%	3%	13%	1%	12%	2%	14%
Small Appliance Repair	(53)	4%	0%	4%	0%	2%	3%	1%	0%
Commercial Vehicle Opn.	(54)	3%	0%	4%	0%	1%	1%	2%	0%
Teacher's Aide	(55)	2%	8%	3%	8%	1%	9%	0%	7%
Other necessary course	(56)	34%	36%	35%	31%	25%	38%	32%	45%
Other possible course	(57)	12%	10%	16%	14%	11%	15%	14%	19%

Percentage of students indicating choice "B" in listing of course:

(34)	7%	3%	18%	5%	12%	7%	8%	0%
(35)	10%	0%	11%	2%	7%	1%	9%	0%
(36)	2%	0%	7%	2%	6%	1%	6%	0%
(37)	14%	1%	18%	2%	11%	4%	8%	0%
(38)	1%	6%	4%	2%	4%	4%	3%	0%
(39)	18%	4%	24%	2%	13%	4%	14%	0%
(40)	8%	4%	10%	9%	3%	7%	6%	0%
(41)	7%	7%	16%	5%	11%	5%	12%	5%
(42)	1%	3%	3%	6%	3%	7%	6%	0%
(43)	3%	1%	15%	1%	11%	1%	15%	0%
(44)	10%	1%	13%	2%	11%	2%	12%	0%
(45)	3%	6%	6%	12%	7%	5%	9%	0%
(46)	8%	2%	11%	5%	9%	4%	10%	0%
(47)	1%	10%	4%	14%	2%	8%	2%	14%
(48)	2%	0%	4%	0%	4%	0%	3%	0%
(49)	4%	6%	8%	0%	5%	0%	6%	0%
(50)	2%	4%	12%	3%	6%	5%	9%	4%
(51)	8%	3%	12%	2%	6%	1%	8%	2%
(52)	3%	13%	5%	12%	3%	14%	3%	4%
(53)	4%	0%	7%	3%	4%	1%	6%	3%
(54)	7%	0%	13%	2%	10%	1%	4%	7%
(55)	0%	10%	4%	8%	1%	6%	3%	6%
(56)	2%	1%	7%	4%	9%	5%	12%	7%
(57)	20%	30%	26%	22%	22%	33%	14%	35%

58. Percentage of students showing interest in a mini-skill type of course as indicated in questionnaire:

	9		10		11		12	
	M	F	M	F	M	F	M	F
(58) First Aid--yes	38%	43%	38%	42%	30%	48%	37%	58%
no	51%	43%	50%	47%	56%	47%	52%	39%
(59) Firefgting-yes	32%	12%	29%	11%	33%	17%	32%	14%
no	54%	75%	64%	80%	50%	75%	58%	78%
(60) Photogrphy-yes	38%	39%	50%	42%	35%	39%	55%	43%
no	50%	50%	40%	48%	51%	53%	36%	43%
(61) Needlecrft-yes	6%	37%	4%	33%	6%	51%	2%	43%
no	78%	43%	88%	54%	77%	41%	85%	45%
(62) Rug braidg-yes	6%	34%	2%	28%	4%	39%	2%	30%
no	80%	50%	85%	61%	76%	53%	86%	55%
(63) Police Pct-yes	34%	19%	31%	14%	24%	14%	21%	23%
no	49%	65%	57%	73%	58%	73%	67%	65%
(64) Consumer K-yes	39%	40%	38%	35%	35%	41%	44%	33%
no	45%	43%	52%	53%	48%	50%	46%	40%

65. Percentage of students who <u>have made definite plans</u> for a future occupation and who have had similar work experience in the past:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes, had experience	30%	26%	25%	17%	24%	28%	32%	42%
no, no experience	43%	42%	42%	42%	48%	41%	46%	38%

66. Percentage of students who are aware of businesses in home town area which could accomodate their experience needs:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes, experience available	31%	36%	30%	29%	28%	39%	48%	39%
no	15%	12%	18%	10%	23%	14%	23%	22%
don't know	0%	19%	18%	18%	20%	15%	10%	19%

67. Percentage of students who would consider part-time employment for experience in their chosen occupational field:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	52%	57%	54%	45%	58%	62%	65%	72%
no	9%	5%	4%	4%	5%	3%	10%	7%
don't know	8%	7%	10%	9%	7%	4%	5%	4%

68. Percentage of students who would take a vocationally-oriented course in place of social studies, math or an elective:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	57%	61%	73%	59%	63%	63%	11%	15%
no	29%	27%	26%	25%	23%	3%	9%	3%

69. Percentage of students who would take a course (like #34-57) in addition to their schedule:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	47%	46%	53%	44%	47%	47%	19%	14%
no	16%	13%	12%	18%	21%	17%	19%	7%
don't know	29%	30%	26%	28%	21%	23%	4%	1%

70. Percentage of student reactions to the questionnaire:

	9		10		11		12	
	M	F	M	F	M	F	M	F
interesting, important	55%	37%	38%	31%	37%	31%	19%	16%
interesting, not helpful	14%	29%	35%	37%	23%	32%	39%	51%
difficult to answer	16%	21%	12%	17%	10%	18%	10%	5%
waste of time	10%	8%	12%	8%	21%	13%	27%	15%

71. Percentage of students who would like to help physically or mentally handicapped students:

	9		10		11		12	
	M	F	M	F	M	F	M	F
yes	36%	57%	30%	53%	36%	61%	30%	64%
no	38%	14%	28%	12%	30%	13%	31%	9%

LEGAL DEFINITION:

Handicapped, Disadvantaged Individual

"Disadvantaged individual" means (1) any individual who is under a physical or mental disability which constitutes a substantial handicap to employment, but which is of such a nature that vocational rehabilitation services may reasonably be expected to render him fit to engage in a gainful occupation; (2) an individual disadvantaged by reason of his youth or advanced age, low educational attainments, ethnic or cultural factors, prison or delinquency records, or other conditions which constitute a barrier to employment; and (3) a member of his family when the provision of vocational rehabilitation services to family members is necessary for the rehabilitation of an individual described in subdivision (1) or (2); (f) evaluation and work adjustment services include, as appropriate in each case, such services as (1) a preliminary diagnostic study to determine that the individual is disadvantaged and has an employment handicap, and that services are needed; (2) a thorough diagnostic study consisting of a comprehensive evaluation of pertinent medical, psychological, vocational, education, cultural, social and environmental factors which bear on the individual's handicap to employment and rehabilitation potential including, to the degree needed, an evaluation of the individual's personality, intelligence level, educational achievements, work experience, vocational aptitudes and interests, personal and social adjustments, employment opportunities and other pertinent data helpful in determining the nature and scope of services needed; (3) services to appraise the individual's patterns of work behavior and ability to acquire occupational skills and to develop work attitudes, work habits, work tolerance and social and behavior patterns suitable for successful job performance including the utilization of work, stimulated or real, to assess and develop the individual's capacities to perform adequately in a work environment; (4) any other goods or services provided to a disadvantaged individual, determined to be necessary for and which are provided for the purpose of ascertaining the nature of the handicap to employment and whether it may reasonably be expected the individual can benefit from vocational rehabilitation services or other services available to disadvantaged individuals; (5) outreach, referral and advocacy; and (6) the administration of these evaluation and work adjustment services. (1969, P.A. 449, S.1.)

An attempt to quantify the numbers of handicapped students and disadvantaged students in the seven high schools was made through the office of Special Education Services and the Superintendent of School's Office in each of the school systems. A questionnaire was submitted to the authority in an attempt to establish the numbers and trends toward the dual problems of special education each of these groups requires. (see Appendix III through V). The information received was very valuable but for the most part incomplete, making the following observations of a strictly general nature.

In most cases no count of "disadvantaged" students had been made in the high schools. Of the schools responding, "disadvantaged" students were those students considered in the low-average intellect area. It was

felt that these students could not benefit from offerings in the high schools since the facilities and individual guidance needed to give these students special attention are lacking. No program for accomodating these students is presently available, but certain new courses are being instituted to try and compensate for the apparent need. At this time, "disadvantaged" students represent less than 1% of the total seven school population.

Students considered "handicapped", physically, perceptually, and mentally are much more apparent, and special education programs represent an ongoing part of most high schools. In some cases, school systems share programs in special education. Others cooperate with regional centers and private workshops, or have students participate in non-graded programs in the schools. The number of "handicapped" students also represents less than 1% of the total school populations, of the seven towns.

One important source of information for the incidence of children eligible for state aid for the "handicapped" or "disadvantaged" will be the 1970 Census Report, Series PC(1) - C + D, which establish general social and economic characteristics on a sample basis of 20%. Other information can be established by a thorough survey based on the recommendations of the state board of education concerning "evaluation and work adjustment services".

The significance of "disadvantaged" is important to note when considering that "economically disadvantaged children" mean children of families with an annual income of less than four thousand dollars per family or children receiving state aid for dependent children. This situation exists in many of the participating towns. It cannot be grasped until an effort is made to investigate the opportunities available to these children and capitalize on them.

see Appendix III - V

POST SECONDARY SCHOOL STUDENTS

Post-secondary school students are the most significant group of students to be effected by the innovative program. This group also represents the most difficult sector of the student population to come in contact with. None of the high schools surveyed have up-to-date information on last year's graduating class, but neither do they have the time and facilities to conduct so comprehensive a survey. The counseling loads have reached a 500 to 1 ratio in one of the participating high schools. The post-secondary school student is the individual who is not participating in further education, and is either underemployed or unemployed. The only information available at this time concerning recent graduates is the Graduate Follow-Up compiled by the Division of Vocational Education of the Connecticut State Department of Education. This report indicates the number of students graduating from specific vocationally-oriented programs in the high schools and the degree of employment they had attainded since graduation.

This information is extremely valuable in assessing the successes of the vocational programs in the various high school programs, and will continue to aid the innovative education program in future years, but at this time does not establish a significant perspective of post-high school unemployment. This information is not available, even in terms of a youth employability factor from the State Department of Labor. Newspaper coverage of the projected program for post-high school students has been facilitated by the Farmington Valley Herald, the regional weekly, and the Farmington Valley news of the Hartford Times.

Verbal feedback from seniors interviewed in the course of the survey investigation indicated that the opportunity to return to the high school offered them a significant advantage. The thought of an opportunity to specialize or gain experience was encouraging, as many face uncertainty about their future as they graduate.

In an attempt to measure the frequency of students leaving college, or further education, the number of students from the seven towns enrolled at Central Connecticut State College in the past year was established. This number was then compared to the number of students, living in the seven towns, who had withdrawn from the College(for undetermined reasons), during that semester. This data, conceivably represents the number of students from CCSC who entered the labor market last year, contrary to initial plans to graduate from college. Of the seven towns, 233 students of all grade levels were enrolled for the Spring Semester, 1971. Of the 233, forty students withdrew forreasons unknown (or 17% of the seven town population). For Fall, 1971, of 227 students enrolled, 22 withdrew from the school. These figures do not account for students returning to the college after a leave of absence, or sickness, which might be the circumstance in all the cases, but if it is possible for 17% of a regional population to withdraw in the course of a few months, the proportion of students returning to their home towns from other Colleges and Universities is well worth considering. The coexistence of the college drop-out and the high school terminal student who is unemployed makes a special program oriented to the occupational needs of the post high school student very important.

The most obvious observation to make in light of these considerations is that the present senior class represents the post-high school students of the future. It is crucial to the investigation of the post-secondary school student, that this class be informed of the possible programs available to them in the high school in the future.

RECOMMENDATION:

A strong recommendation would be to make personal contact with the students in the high schools to (1) find out if there are people they know who are recent graduates and who might be interested in training and skills and, (2) explain to them the dimensions and responsibilities of the program, and how they can get involved.

PART --II

ANALYSIS OF PROGRAMS

Vocational Education in the Farmington Valley Schools

The approach that was taken with regard to Innovative Vocational Education in the Farmington Valley region was to determine what areas of the school offered the greatest potential for developing vocational courses within the existing curriculum structure and present facilities. While all of these schools are in the main college preparatory, there are a few courses offered in each school that are definitely vocational in the purest sense and others while not vocational in their present direction, nevertheless have great career potential.

The typing and secretarial courses offered by the business departments are strictly vocational because the skills that are learned and developed are directly employable upon completion of the course. Because of the nature of the training and the requirements of employers, we found that this area did not lend itself to innovation.

The Home Economics departments of each school are in a better position to offer vocationally oriented courses. A great variety of course offerings exists among the towns in which some are directed toward more vocational pursuits. Table VI has listed three areas of home economics studies which are vocationally oriented.

By far the areas of the school which have the greatest potential for innovative vocational education programs is in the Industrial Arts department. The woodworking, metalworking, graphics, electrical and power mechanics shops abound in potential career development experiences All too frequently however, most of the Industrial Arts personnel do not consider the purpose of their instruction to be vocational. If vocational education courses are to be initiated within the structure of the industrial arts departments, a recognition of the principles of vocational education as they differ from industrial arts must take place in the minds of the industrial arts teachers before such courses can succeed.

Some confusion has existed for many years with regard to the relationship between industrial arts and vocational industrial education. The main distinction between the two is one of purpose. Industrial Arts is included in school curricula primarily to serve the non-occupational needs common to a majority of students. The objectives of industrial arts are those of general education and are concerned with habits, attitudes, appreciations, liesure time, home mechanics and consumer knowledge. While some skills useful to vocations are frequently acquired in industrial arts, this acquisition is incidental and secondary to the major purposes of industrial arts.

The purpose of vocational industrial education is to enable workers and prospective workers to acquire vocational efficiency in a chosen occupation. In today's rapidly changing technology, training and retraining in specific technical occupations is an ongoing, ever-changing, and must be a continually improving activity. Therefore, the problem of determining whether a specific course involving industrial shop activity is industrial arts or vocational education is simply a matter of determining the major purpose of the activity. If it is designed to serve the needs held in common by a majority of school students or adults it is industrial arts insofar as these persons are concerned. If, on the other hand, the activity is organized to enable a student to prepare for or progress in a specific occupation of his choice the activity is classified as vocational industrial education.

Vocational Education is a major part of career education, but career education should not be considered synonymous with vocational education. Industrial arts should not assume that the transfer of relevance of their subject to career development is automatic. The shop activity in the vocational programs must be related to life and career development.

Marvin Feldman has said we can no longer tolerate an educational system that ignores the world of work where occupational studies are considered inferior to general studies and where youngsters in vocational tracks do not receive the training necessary for entry into college and those in college preparatory tracks are denied a vocational experience which relates their learning to reality.

The 1969 Annual Report of the National Advisory Council on Vocational Education notes that by 1980, fewer than 20% of the job opportunities will require a four year college degree.

Description of Existing Industrial Arts and Home Economics Programs

Tables I through VI describe the industrial arts and home economics programs that are either in operation now or are planned for the coming 1972-73 year. The tables are constructed in such a way as to present the pertinent information in a concise manner. The objective was to provide a convenient town by town comparison of the type and extent of course offerings available with a tabulation of enrollment statistics. A brief description of the column is as follows:

ENROLLMENT - The total enrollment for a particular course in all grades as desired by the students.

MAX # of STUDENTS/CLASS - This is the capacity of the classroom or the optimum number of students that can be accommodated as determined by the school.

AREA/STUDENT IN LARGEST CLASS - This figure (in square feet) is based upon the largest anticipated class divided into the floor area of the room.

The State Bureau of School Buildings recommends that the number of square feet in the woodworking and metalworking shops be based upon 120 square feet per student including storage.

From these columns it is possible to determine:

a, the number of sections and therefore the number of class periods required to handle the projected enrollment.
b, the ability of a town to accommodate additional students from the region who show interest in a particular course.
c, the number of work stations in a shop compared to the maximum number of students allotted per class that might suggest a larger class with more than one instructor participation.

Enrollment figures are based on student preference as gathered by each school toward the end of the 1971-72 school year. They should not be considered absolute as adjustments in class scheduling for the coming year will undoubtedly alter these figures to some extent. They represent the best indication of enrollment at the time they were made available.

Tables VII through XII describe the woodworking and metalworking shops in each school with an evaluation of a number of supporting facilities in each shop. All schools have sizeable woodworking shops and with the exception of East Granby, all have metalworking shops. These two areas were explored in greater detail because these shops offer the greatest potential for innovative vocational education programs. Facilities for carrying on certain vocational skill training within the shop vary from town to town and it became necessary to make a judgement on the adequacy of such facilities to aid in the selection of a shop for specific programs.

The use of the terms adequate (A) or superior (S) in describing the extent of the facilities is entirely subjective. Observations and comparisons were made on a school-to-school basis. Listed below is a description of what would constitute a superior support facility. Adequate facilities fall short of superior in one or more aspects but are considered suitable for their intended purpose.

Superior overhead lighting is lighting sufficient to illuminate the entire room with no dark corners and with no need to illuminate localized areas of work around power machinery, welding booths or other areas of close observation. Outside natural lighting was excluded from this consideration.

Superior exhaust system is a system which expels all fumes, dust, and smoke to the outside of the building, which has sufficient ports to cover more than one operation and which does not upset comfort heating facilities nor create disturbing noises.

Superior dust collection is the ability to remove all dust particles as they are generated from woodcutting operations. Each woodcutting machine would have individual ductwork leading to a centralized collector which shall be located outside the room where woodcutting operations are being performed.

Superior electrical power is the availability of 110/220/440 volt AC single or three phase at any point in the room. It's accessibility should offer a maximum of safety with freedom from long extensions. Circuit breaker and emergency shut down switches should be conveniently accessible.

Superior lockable storage refers to a lockable room to which entry can be gained only through a door. A wire screen cage of less than ceiling height would not qualify.

In both woodworking and metalworking shops certain floor mounted machines used for material cutting and forming are considered standard equipment. The minimum complement of machines necessary to perform basic operations is shown below. In Tables VII and IX, the column marked minimum equipment complement was checked for each school which has this complement. Where a shop was deficient in one or more basic machines, it is so indicated by a minus number. Hand tools such as chisels, files and saws as well as power portable tools were not surveyed. Of course, benches with vises are basic to any shop operation.

Minimum power equipment complement consists of at least one of each of the following units:

Woodworking equipment	Metalworking equipment
Circular or Radial Arm Saw	Engine lathe (6" min radius)
Band saw	Drill press
Jig saw	Vertical miller
Planer	Horizontal miller
Joiner	Precision grinder
Wood lathe	Shaper
	Welding equipment
	Casting and Forging equipment
(see Appendix VI)	Sheet metal press and shear

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1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMICS

TABLE I

	COURSE LENGTH	WOODWORKING I			WOODWORKINGG II			WOODWORKING III			
		ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	
AVON	½ yr.	41	20	60	13	20	155	12	20	165	WW3 - House Constr.
BLOOMFIELD	1 yr.	42	15	155	10	15	230	11	15	220	WW2 - Cabinetry WW2 - Adv. Woods
CANTON"	1 yr.	33	14	170	21	14	170	N/O			
EAST GRANBY	½ yr.	27	15	80	19	15	80	N/O			
FARMINGTON	½ yr.	32	unk	unk	27	unk	unk	N/O			WW2 - 2 pd/day
GRANBY[a]	1 yr.	58	15	110	26	15	110	21	15	110	
SIMSBURY	1 yr.	17	16	200	38	16	200	15	16	210	

a, Woodworking and Metalworking classes combined into single shop called Production Area

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1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMICS

TABLE II

	COURSE LENGTH	METALWORKING I			METALWORKING II			METALWORKING III			
		ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	
AVON	½ yr.	33	20	60	40	20	60	N/O			MW2 - Art Metal
BLOOMFIELD	½ yr.	8	15	250	N/O			N/O			
CANTON	1 yr.	22	16	155	25	16	155	N/O			
EAST GRANBY		N/O			N/O			N/O			
FARMINGTON	½ yr.	24		unk	11		unk	N/O			MW2 - 2 pd/day
GRANBY [a]	1 yr.	58	15	110	26	15	110	21	15	110	
SIMSBURY	1 yr.	12	16	270	20	16	200	9	16	360	

a, Metalworking and Woodworking classes combined into single shop called Production Area

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TABLE III

1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMICS

	COURSE LENGTH	GRAPHICS I ENROLLMENT	GRAPHICS I MAX # OF STUDENTS/CLASS	GRAPHICS I AREA/STUDENT IN LARGEST CLASS	GRAPHICS II ENROLLMENT	GRAPHICS II MAX # OF STUDENTS/CLASS	GRAPHICS II AREA/STUDENT IN LARGEST CLASS	GRAPHICS III ENROLLMENT	GRAPHICS III MAX # OF STUDENTS/CLASS	GRAPHICS III AREA/STUDENT IN LARGEST CLASS	Remarks
AVON		N/O									
BLOOMFIELD [a]	½ yr	15	15	130	15	15	130	15	15	130	Gr.2 - Offset Lith.II ½yr Gr.3 - Offset Lith.II ½yr
CANTON		N/O									
EAST GRANBY	½ yr	9	unk	unk							New course for 1972-73, Silk Screen
FARMINGTON [b]	½ yr	27 [b]	unk	unk	14	unk	unk	7/8	unk		Gr.4 - pre-vocational Adv. Graphics
GRANBY	1 yr	29	12	75	11	12	80	5	12	180	Gr.3 - new course for 1972-73
SIMSBURY		N/O									

a, Additional intermediate ½ year Graphics courses in Visual Comm. and Silk Screen

b, Enrollment shown is 1/3 of 9th grade boys in exploratory program.

TABLE IV

1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMICS

	COURSE LENGTH	POWER MECH I ENROLLMENT	POWER MECH I MAX # OF STUDENTS/CLASS	POWER MECH I AREA/STUDENT IN LARGEST CLASS	POWER MECH II ENROLLMENT	POWER MECH II MAX # OF STUDENTS/CLASS	POWER MECH II AREA/STUDENT IN LARGEST CLASS	POWER MECH III ENROLLMENT	POWER MECH III MAX # OF STUDENTS/CLASS	POWER MECH III AREA/STUDENT IN LARGEST CLASS	Remarks
AVON	½ yrs	31	20	60	N/O						Metal shop facilities used
BLOOMFIELD	½ yr.	15	15	120	15	15	120	12	15	150	2 bay auto shop 1800 sq. ft. no lifts
CANTON	1 yr.	29	16	155	N/O						Metal shop facilities used
EAST GRANBY		N/O									
FARMINGTON [a]	½ yr.	27	unk	unk	57	unk	unk	N/O			
GRANBY	1 yr.	46	15	60	23	15	60	N/O			900 sq. ft
SIMSBURY	1 yr.	39	16	65	23	16	65	N/O			Power Mech and Elec. in same room

a, Enrollment shown is 1/3 of 9th grade boys in exploratory program

TABLE V

1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMCCS

	COURSE LENGTH	ELECTRICITY I			ELECTRICITY II			ELECTRICITY III			
		ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	ENROLLMENT	MAX # OF STUDENTS/CLASS	AREA/STUDENT IN LARGEST CLASS	
AVON	½ yr.	23	12	60	12	12	60	19	12	60	Graymark electronic instructional kits used
BLOOMFIELD		N/O									
CANTON		N/O									
EAST GRANBY	½ yr.	9	9	40	1	9	380	N/O			Lab-Volt instructional electronic kits used
FARMINGTON [a]	½ yr.	27	unk	unk	15	unk	unk	9	unk	unk	Elect. 3 - 1 yr. DeVry training equip. used
GRANBY		N/O									
SIMSBURY		15	15	70	N/O						Electrical and Power Mech use same room

a, Enrollment shown is 1/3 of 9th grade boys in exploratory program

TABLE VI

1972-73 STUDENT ENROLLMENT IN INDUSTRIAL ARTS AND HOME ECONOMICS

	COURSE LENGTH	FOODS & NUTRITION ENROLLMENT	FOODS & NUTRITION MAX. # STUDENTS/CLASS	FOODS & NUTRITION AREA/STUDENT IN LARGEST CLASS	CLOTHING/TEXTILES ENROLLMENT	CLOTHING/TEXTILES MAX. # STUDENTS/CLASS	CLOTHING/TEXTILES AREA/STUDENT IN LARGEST CLASS	CHILD CARE ENROLLMENT	CHILD CARE MAX. # STUDENTS/CLASS	CHILD CARE AREA/STUDENT IN LARGEST CLASS
AVON	½ yr.	Home Economics I thru VI course offerings are composites of above areas and are not separable by semester into specific vocationally oriented courses.								
BLOOMFIELD	1 yr.	19	20	55	43 / 10	15	95	15 [a]	25	60
CANTON	½ yr.	4	14	225	7	14	130	12	14	50
EAST GRANBY	½ yr.	30	14	70	23 [b]	14	70	16	14	70
FARMINGTON	½ yr.	14	15	30	33 [c]	15	30	39 [d]	unk	unk
GRANBY		Alternate years only N/O for 1972-73			19	16	90	N/O		
SIMSBURY	½ yr.	10 / 18	24 [e]	62	25	24	70	91	24 [f]	70

Foods & Nutr.- 1 yr

Meal Mngmt/ Food Serv.
Clothing- 1 yr.

Clothing I/II enrollment

a. Course Title - Home and Family
b. Sum of enrollments in Dressmaking and Tailoring
c. Sum of enrollments in Clothing and Tailoring
d. Second half of year, course titled Nursery, where child observation is available
e. Enrollment for advanced food preparation including large scale food projects
f. Primarily discussion course with little or no observation of children

WOODWORKING OPERATIONS AVAILABLE IN EACH SCHOOL

TABLE VII

	CRAFTS PROJECTS USING HAND/POWER TOOLS	CARPENTRY AND/OR SMALL BUILDING CONSTRUCTION	CABINET MAKING	FINISHING - PAINT, STAIN	ADHESIVES - BONDING, RESINS, FIBREGLASS	FURNITURE CONSTRUCTION, BOOKSHELVES, TABLES.	MINIMUM EQUIP. COMPLEMENT	APPROX. # OF WORK STATIONS	SHOP FLOOR AREA INCLUDING STORAGE
AVON	X	X	X	X	X	X	X-1	16	1200 sq. ft.
BLOOMFIELD	X	X	X	X	X	X	X	24	2330 sq. ft.
CANTON	X	X		X		X	X	30	2400 sq. ft.
EAST GRANBY	X	X		X		X	X	20	1200 sq. ft.
FARMINGTON	X		X	X		X	X	22	2100 sq. ft. [b]
GRANBY	X			X		X	X	18 [a]	1650 sq. ft.
SIMSBURY	X	X		X	X	X	X	30	3250 sq. ft.

a, Total work stations in Production Area
b, Based on floor plan of new I.A. wing

EVALUATION OF SUPPORT FACILITIES IN THE WOODWORKING SHOP

TABLE VIII

	OVERHEAD LIGHTING	LOCKABLE STORAGE	DUST COLLECTING SYSTEM	VENTILATED PAINT/VARNISH BOOTH/ROOM	ELECTRICAL POWER	
AVON	A	N	N	N	A	
BLOOMFIELD	S	N	A-S	N	A	
CANTON	S	S	S	S	S	
EAST GRANBY	A	A	N	A	A	
FARMINGTON	unknown for new building					
GRANBY	S	S	N	S	S	
SIMSBURY	S	N	A	S	S	

TABLE IX

METALWORKING OPERATIONS AVAILABLE IN EACH SCHOOL

	SHEET METAL FABRICATION	PRECISION MEASURING INSTRUMENTS	POWER MACHINE OPERATION	GAS WELDING/ARC WELDING	FOUNDRY AND CASTING	PLASTICS & OTHER NON-METALLIC FABRICATION	MINIMUM EQUIP. COMPLEMENT	APPROX. # OF WORK STATIONS	SHOP FLOOR AREA INCLUDING STORAGE
AVON		X	X	X / X	X	X	X	20	1200 sq. ft.
BLOOMFIELD	X	X	X	X / X	X		X	25	2000 sq. ft.
CANTON	X		X	X / X	X		X	20	2500 sq. ft.
EAST GRANBY						X	N/O		Plastics taught in WW2
FARMINGTON	X	X	X	X / X	X		X	32	3000 sq. ft. [b]
GRANBY	X		X	X /	X		X-3	18 [a]	1650 sq. ft.
SIMSBURY	X		X	X / X	X	X	X	30	3200 sq. ft.

a, Total work stations in Production Area
b, Area based on floor plan of new I.A. wing

TABLE X

	OVERHEAD LIGHTING	FORCED EXHAUST SYSTEM	HOISTS	OVERHEAD DOORS	FLOOR DRAINS	WELDING BOOTHS	LOCKABLE STORAGE	ELECTRICAL POWER
AVON	A	N	N	N	N	N	N	A
BLOOMFIELD	A	N	N	A	N	N	S	A
CANTON	S	A	N	A	A	A	S	S
EAST GRANBY	Facilities not available							
FARMINGTON	UNKNOWN FOR NEW BUILDING							
GRANBY	S	A	N	N	N	N	S	S
SIMSBURY	A	A	N	A	A	S	N	S

GRAPHICS AND PRINTING OPERATIONS AVAILABLE IN EACH SCHOOL

TABLE XI

	LAYOUT TABLES FOR COMPOSING	TYPESETTING EQUIPMENT	OFFSET LITHOGRAPHY	LETTER PRESS PRINTING	VARITYPER ELECTRIC TYPESETTING EQUIPMENT	BLACK & WHITE DARK ROOM PHOTOGRAPHY	COLOR REVERSAL FILM DEVELOPMENT	Square Feet of floor space
AVON	N/O							
BLOOMFIELD	X	X	X	X	X	X	X	2000 sq. ft.
CANTON	N/O							
EAST GRANBY	N/O							
FARMINGTON	X	X	X	X		X		1630 sq. ft. a
GRANBY	X		X			X		900 sq. ft.
SIMSBURY	N/O							

a, Area based on floor plan of new I.A. wing.

TABLE XII

ELECTRICAL/ELECTRONICS OPERATIONS AVAILABLE IN EACH SCHOOL

	BASIC ELECTRICAL THEORY & ELECTRONIC COMPONENTS	ELECTRICAL POWER SOURCES BATTERYS, GENERATORS, ETC	SMALL APPLIANCE REPAIR	HOUSE WIRING	CIRCUIT DESIGN, TUBE & TRANSISTOR CHARACTERISTICS	RADIO AND/OR TV SERVICING	Floor area	REMARKS
AVON	X	X	X		X	X	700 sq. ft.	
BLOOMFIELD	N/O							
CANTON	N/O							
EAST GRANBY	X	X			X	X	380 sq. ft.	
FARMINGTON	X	X			X	X	1400 sq. ft.	
GRANBY	N/O							
SIMSBURY	X	X	X	X			1050 sq. ft.	a

a, Electrical and Power Mechanic classes share same room

STATE TECHNICAL COLLEGES

The State Technical Colleges differ from other community colleges in that their programs are not intended to be feeders into the senior levels of a college or university. Their objectives have been and still are the training of fully qualified engineering technicians who are direct support personnel to scientists and engineers. While their objectives are identical, their programs differ slightly in content.

The following is a brief description of the programs of the four Connecticut State Technical Colleges.

Hartford State Technical College offers 2 year Associate Degree programs in Civil, Data Processing, Electrical, Manufacturing, Mechanical, Nuclear Engineering Technology. In addition they offer one year certificate courses in Fire Technology, Surveying and Pre-Technical courses.

The Waterbury State Technical College offers 2 year Associate Degree Courses in Chemical, Data Processing, Electrical, Manufacturing, Materials, Mechanical, Civil Engineering Technology. In addition they offer one year certificate courses in Fire Technology, Industrial Management and Drafting Technology.

The Thames Valley State Technical College offers essentially the same courses as the Waterbury Technical College with the addition of a new (1972-73) one-year certificate course in Electronics Technology.

The Norwalk State Technical College again offers essentially the same programs as the Waterbury Technical College with the addition of 2 year Associate Degree program in Electro-Mechanical Engineering Technology and a one year certificate course in Architectural and Building Construction Drafting Technology.

APPRENTICE TRAINING

Apprentice training programs provides workers with on-the-job training along with related classroom instruction for anywhere from two to five years, depending on the occupation involved. Each program is carried out under a contract between the apprentice and the employer under the direction of the Apprentice Training Division of the State Labor Department. This arrangement, of learning from experienced tradesmen both on-the-job and in the classroom, enables a worker to advance to a journeyman level and beyond, while at the same time being paid progressively higher wages.

Apprenticeship programs in Connecticut are guided by standards established and supervised by Connecticut State Apprenticeship Council, which is composed of representatives of management, labor and vocational education. The Council has a deep committment to maintaining standards of excellence which will enable trainees to enter the journeyman ranks as skilled craftsmen.

(see Appendix VII)

COOPERATIVE WORK EXPERIENCE PROGRAMS

All towns with the exception of Granby and East Granby have work experience stations within their town. Each town which has such a program was asked a number of questions regarding the success of his program. Of the towns responding, all said they conducted interviews with the prospective employer for the purpose of defining the educational outcomes of the students participating. Replys varied from town to town to the extent that employers furnished a job description or list of responsibilities in which the student was to be exposed. The evidence was strong, however, that employers and counselors evaluated their student workers usually once each quarter or marking period and that a form was used for such purposes. There is some evidence to suggest that this work experience has resulted in higher grades among the participants. All mentioned that there were more students willing and able to perticipate in this program than were cooperating employers available.

(see Appendix VIII)

PROPRIETARY SCHOOLS

An information-seeking letter was sent out to all private, or proprietary schools in the Greater Hartford-Springfield Area. Information requested was to establish the types of programs, costs, and length of attendence for various vocationally-oriented proprietary schools in the area. A list of over twenty schools of this nature was compiled, but the introduction of a newer and more comprehensive listing of vocational careers by the State Department of Education through its Division of Vocational Education, superceded the efforts of the survey team in this area. The Career Guide lists alphabetically all occupations in which educational programs are offered in the State. It also is a directory in as much as it lists all the state vocational-technical schools, business schools, nursing schools, hospital schools, technical and trade schools, and even the state and private universities and colleges, with a look at basic information on the schools and their vocational career programs. It is recommended that this guide be used to establish areas of occupational training for students involved in the innovative program.

(see Appendix IX)

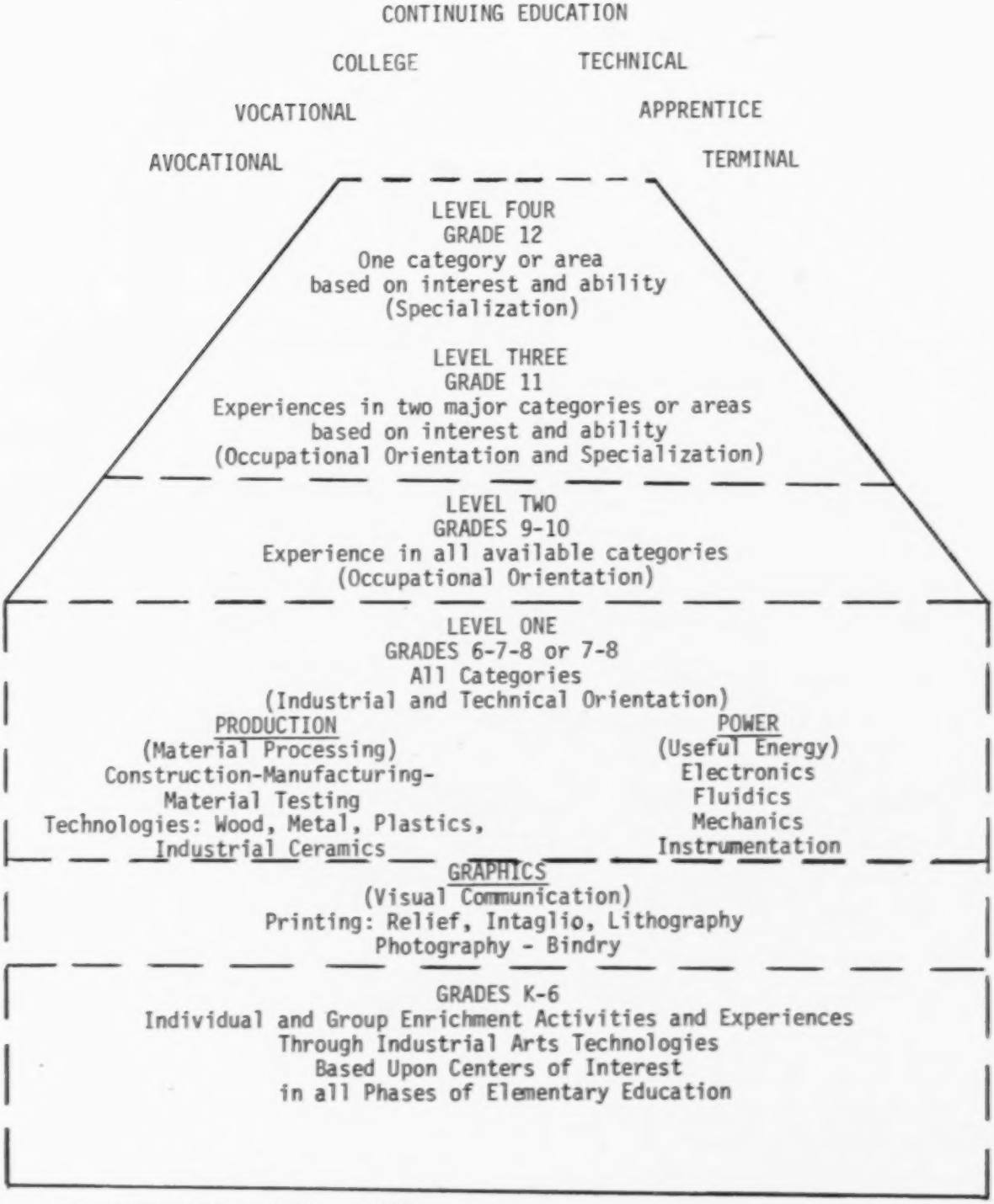
CAREER ORIENTATION PROGRAMS

Through an investigation conducted by the survey team, it was established that three programs of Career Orientation bear further investigation. They are Cliff E. Henning's Career Development Program, from Robbinsdale Area Schools, Minneapolis, Minnesota; Houston's Career Counseling Through Groups, both recent projects in career analysis and orientation, and G. Westley Ketcham's Pyramid Approach as illustrated in the next page.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Elementary and Secondary Education
Hartford

THE PYRAMID APPROACH TO INDUSTRIAL ARTS EDUCATION

G. Wesley Ketcham



Fourth Revision, January 1970
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FUTURE PROGRAMS AS INDICATED BY STUDENTS

Small group discussions with students in five of the seven high schools indicated one strong force being brought to bear on course selection by students in the high schools. In a word, Relevance. These students, and the many others who gave oral or written feedback to the survey questionnaire administered in the high schools, cried out for a meaningful curriculum, and a more realistic appraisal of the "education" they are being offered at the present time. For many of the students, the possibility of "freeing" themself from the push to go to college, took the form of the innovative program as it was explained to them. Still others saw the possibility of learning a skill, and part-time work experience as the vehicle they need to appraise their own occupational attitudes and goals. Some students expressed a desire to participate on the basis of plain interest and enjoyment. The disheartening fact was that all the students shared a skepticism which was unavoidable: something that seems as "good" as the opportunity to realize all these motives, would never be established in the high school. Seeing is believing.

When asked through the questionnaire to indicate a preference for a course listed in 22 possible choices, 294 students felt another course, which they had in mind, would be very necessary for their future, while the following courses showed these numbers of students interested:

1. Auto Maintenance.....	64 students	12. Materials Testing.....	23 students
2. Secretarial Work.....	61 "	13. Printing & Graphics...	20 "
3. Aeronautics	61 "	14. Dental Assistant	20 "
4. Nurse's Aide.....	53 "	15. Accounting.....	19 "
5. Carpentry	50 "	16. Surveying.....	19 "
6. Commercial Art.....	46 "	17. Small Appliance Rpr...	17 "
7. Teacher-Librarian aide	42 "	18. Air Conditioning	17 "
8. Computer Prog.& Keyp..	40 "	19. Barbering & Hairstyle..	19 "
9. Electronics & Radio ..	36 "	20. Commercial Vehicle.....	13 "
10. Food Management.....	31 "	21. Oil Burner Service....	8 "
11. Instruments in Elec..	29 "	22. Plumbing Troublshtng..	8 "

A large proportion of the student population failed to answer these questions positively. In most cases students either answered that the courses did not suit them, or failed to answer. An observation on the courses in the list is that they are fairly restricted to vocational fields, and they demand prior knowledge of the subject to be meaningful in a course. The students responding positively to these questions represent a sizable number considering the probable capacity of each program should it be offered, but more investigation is needed into the demands of students, and the shortcomings of their present programs.

PART --III

MANPOWER DATA

MANPOWER AND EMPLOYMENT

Information assembled from surveys conducted by state agencies in conjunction with the University of Connecticut Labor Education Center and reprinted with the permission of Professor David Pinsky of the Labor Education Center.

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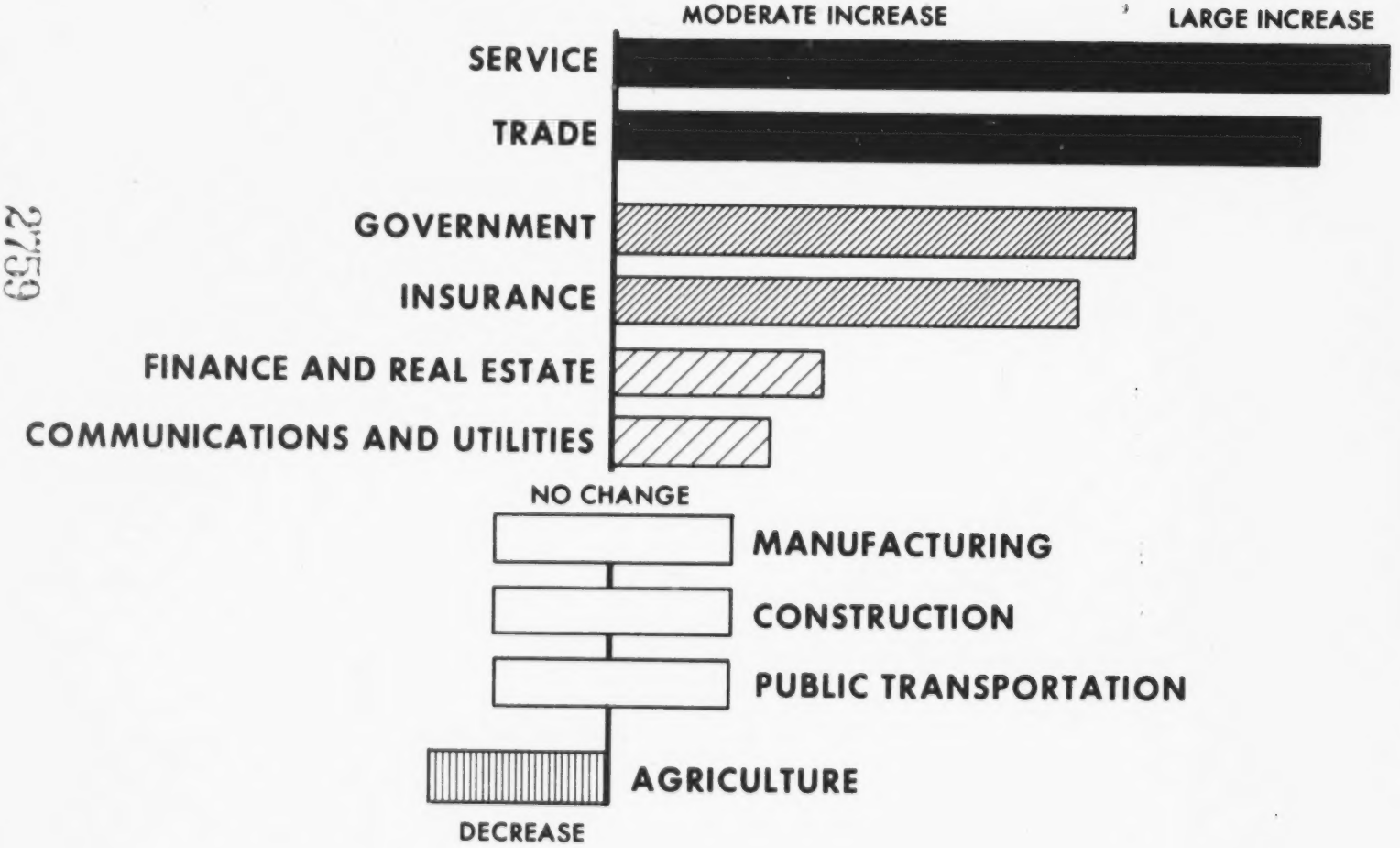
EXPECTED EMPLOYMENT CHANGES BY INDUSTRY
1970 - 1985



2759

EMPLOYMENT CHANGES FOR THE FUTURE

With over 603,000 youths reaching 18 years and the labor force increasing by a net of 221,000 over the next decade, from where will the jobs for the future come?

Let us look at these new jobs first on a business or industry basis.

Largest expansion is expected in the service and trade businesses. The service group includes such activities as health, education, amusements, hotels and motels, automobile repair and service stations, beauty shops, business consulting services, and research. Activities in these groups reflect the trend toward a less material society and have increased rapidly during recent years. As proportionately less people are required to produce food, housing, clothing, automobiles and other material goods, more people avail themselves of health, educational, leisure, and other services which have become part of our rising standard of living. Their continued rapid growth is expected during the decade.

The expansion in trade will be due to both the greater population and to greater output of goods which must be distributed. Not only will there be more people, but it is hoped that more goods will be available to each person as our economy rises.

More people means more government services. These will be needed primarily in the field of health, public safety, streets and highways, and social services. To meet the problems of an expanding population, more federal, state, and local governmental employees will be required in our growing state. The expansion in governmental employment, however, will not be as large as during the sixties due to a slowing down of the population growth and to growing fiscal problems.

Of lesser growth but playing an important part in providing the jobs of the future will be insurance, finance and real estate, and communications and utilities. These business activities will continue to grow but the job growth will be lessened due to new data processing equipment and other automated processes.

Total manufacturing output is expected to increase substantially during the decade but the added output will be achieved through increased productivity rather than through additional workers. During the sixties productivity of Connecticut workers increased by 51%. A similar productivity rise in the seventies will take care of the additional output without any significant change in the employment level.

Building and highway construction is also expected to have a substantial increase but this too will be provided by increased productivity through new methods, materials, and equipment rather than through an increased number of workers.

While the total number of workers is expected to remain the same in these activities there will be a shift in the type of workers needed. In both construction and manufacturing, automated processes will replace mainly unskilled and semi-skilled workers while more skilled, professional, and technical employees will be needed.

Public transportation employment has remained nearly stationary for a number of years and little future change is expected as the increased population turns more toward the use of the automobile rather than mass transit. Increased freight transportation is handled more by larger trucks rather than by more units.

Connecticut's agriculture employment has been affected by both rising productivity and the conversion of farm land into commercial and residential building sites. This trend is expected to continue with the resultant drop in the number of farm workers.

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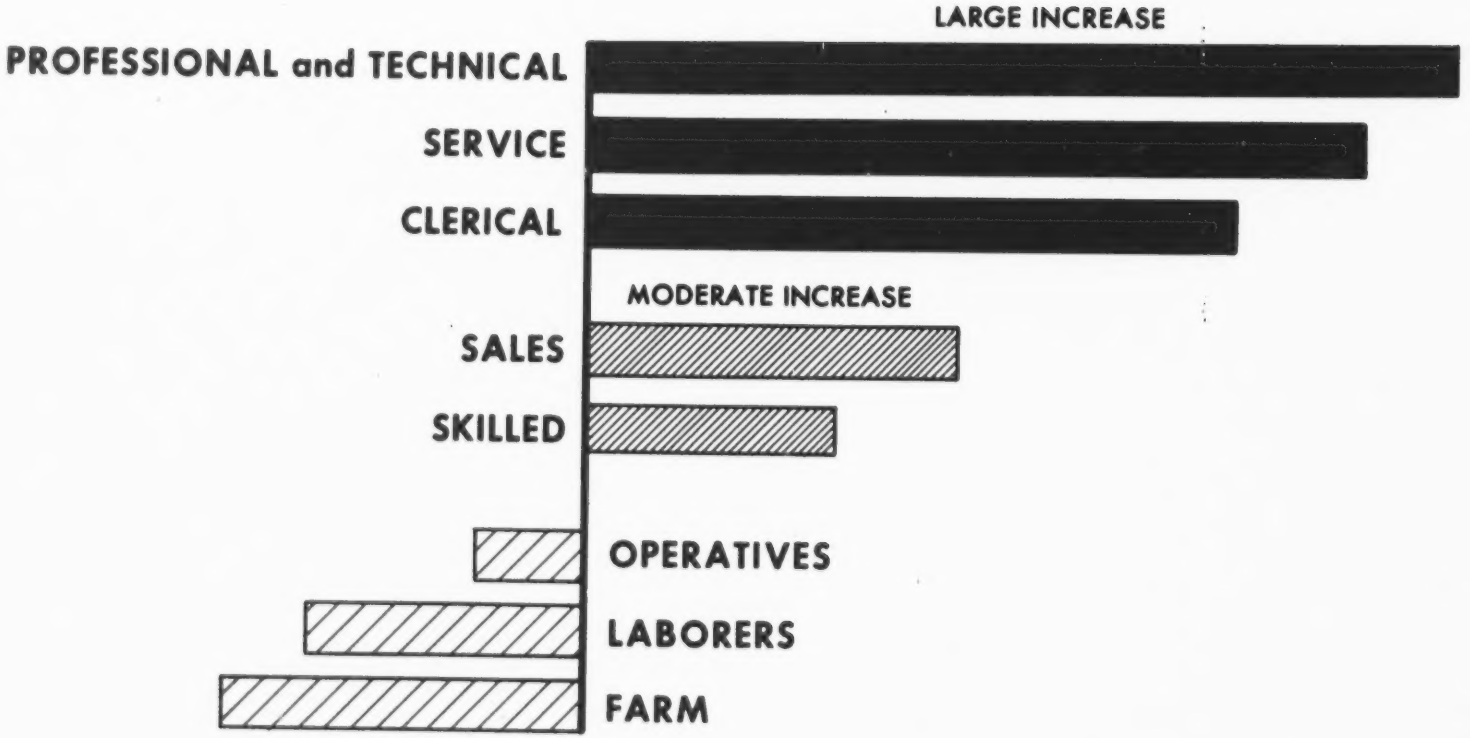
EXPECTED OCCUPATIONAL NEED CHANGES
1970 - 1985



2761

OCCUPATIONAL NEEDS FOR THE FUTURE

The occupational structure of our work force has constantly undergone changes. Agricultural occupations dominated the work force until the start of the twentieth century. They were then supplanted by manufacturing occupations which had their "heyday" during the period spanning the two World Wars. Since the mid 1950's, white collar occupations have dominated. A factor common to the growing occupations is the increasing requirement for higher education and specialized training.

The largest occupational increases expected during the decade are in the professional and technical, and service groups.

Increased production of manufactured goods through more sophisticated and technical machinery will account for the rise of professional engineers and technicians in industry. The concentration of population in cities will require more professional and technical workers on environmental problems and urban renewal as well as in the social sciences. Nearly all professional occupations in the health field will show continuing growth. Research and development activities needed to meet the problems of the seventies will also require more workers in these occupations. Professional and technical jobs increased more rapidly during the past several decades than any other major occupational group and are expected to lead other categories at least through 1985. Counter to this growth trend will be a decline in the need for teachers. Fewer school children will result in considerably lower needs for teachers at the elementary level and a decline or levelling off for high schools and colleges.

The second largest rate of growth will be among service workers. Largest gains in this category will be the health service workers, followed by cooks and waitresses. Large gains are also expected in police officers and firefighters, and in beauticians.

The third largest group among the major occupational groups will be in the office, or clerical, group. Leading this will be the need for secretaries, stenographers, and typists. A strong need will also exist for bookkeepers and cashiers.

In the goods producing occupations a small gain is expected in the skilled occupations while little or no increase is expected for operatives, or semiskilled workers, as sophisticated technological advances replace their services. Jobs for unskilled laborers are expected to continue their decline which was apparent in the sixties.

In the sales field, a continuing growth in the number of jobs is expected but at a considerably lower rate than during the 1960s. While selected sales occupations will grow at a good rate, overall the need will be held down by changing techniques in merchandising.

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HEALTH SERVICES

The following excerpts are taken from a survey report done by Professor David Pinsky of the University of Connecticut Labor Education Center to establish a perspective of future needs in health service occupations.

"The continuing shortage of health personnel is emphasized in the U.S. Labor Department's Occupational Outlook Handbook, which states, "A continued rapid expansion of employment in the health field is expected through the mid-1970's, although the rates of growth will differ considerably among the various health service occupations...In addition, many new workers will be needed each year to replace those who retire, die, or - particularly in the case of women - leave the field for other reasons."

"Health services are thought of mainly in terms of improving physical well-being. They also make a major contribution to the economy. The nation's 1,138 hospitals employ more than 1,800,000 workers, half again more than the entire railroad industry and more than double the number in automobile manufacturing. Hospitals are the fifth largest industry in the nation with assets in excess of $21 billion. Add to this the other forms of health services, i.e. doctors, dentists, industrial health, rest homes, and public health, and the true magnitude becomes apparent. In addition, the employment has been growing faster in health services than in any other sector... In Connecticut, the number pf persons employed in non-governmental health activities totals 43,000, nearly double the 23,000 employed in 1956. This is the fastest growing segment of the state's economy also, and it provides an annual payroll of close to $200,000,000 in 1966."

"The growth will undoubtedly continue over the next decade. Required to meet this expansion will be trained personnel as well as facilities. The training for health service workers involves not only time for actual class learning and work experience, but also time to plan curricula and build physical facilities... In order to plan for the expansion of training programs, some concept of the nature and number of these increasing jobs must be obtained.

"The occupation with the largest ten year need is staff nurse with an estimated demand of 1,714. This consists of 106 current vacancies (1966), an expansion of 221, and a replacement need of 1,387... The next larger needs are also in the nursing field. A ten year demand for 660 nurse aides and 210 licensed practical nurses is expected... In technical occupations, there will be a ten year need for 43 X-ray technicians and 42 medical laboratory technicians. Among dental occupations, there will be a need for 68 dental assistants, 63 dental hygienists, and 60 secretary-dental assistants.... The indicated ten year need for secretary-receptionists in physician's or dentist's offices is 247. In the food area, the largest needs will be for dietary aide- 122, cook- 62, and cook helper- 38."

DISTRIBUTIVE EDUCATION

The following excerpts are taken from a survey report done by Dr. Philip Stiles and Dr. W. Howard Martin of the University of Connecticut to demonstrate a potential for food handling and distributive training in Connecticut.

"A glance at the modern food store tells us that a wealth of planning, ingenuity, and skill are necessary to keep today's many food products flowing smoothly into consumer hands. However, little emphasis has been given to education aimed at more effective and efficient distribution of food.

Today there is a shortage of well-trained people in the food handling handling and distribution industries. While automation and pre-packaged convenience foods have replaced some traditional skills, new and more demanding positions grow and grow. The industry will continue to face an acute shortage of managerial talent--people to fill positions as store managers, supervisors and other administrative jobs.

The food industry is finding that vocational training at high school or post-high school levels is of value to youths entering their employ. It is also advantageous in youth's search for higher starting wages, more attractive positions and their understanding of the job he seeks.

Stability and security are the hallmarks of the food industry. Its opportunities for advancement are equal of even superior to many other occupations. Numerous satisfying, well-paid jobs exist at all levels, and the opportunity is great for frequent advancement of well-trained individuals."

"As in other significant enterprises, it seems evident that a variety of educational programs are needed. This variation is needed to serve persons having different levels of ability and aspirations. It is needed in terms of job specialization.

The nature of these programs suggest three broad areas of educational needs: (1) knowledge of foods and food products (technical), (2) salesmanship, and (3) marketing and management. In traditional programs of vocational education these three areas are generally found in three or more instructional areas.

Broad parameters exist in vocational training in all the food related industries including food distribution. Job levels range from positions for handicapped and retarded persons, to executives and research scientists.

Student potential in a food distribution program must be developed. The tremendous opportunity exists for part-time food store employment at convenient hours during the student's free time. However, interest must be nurtured to maintain student demand. This is enhanced by industry encouragement, job advancement, teacher enthusiasm, adequate counseling and parent acceptance. These must be integrated into the total program to insure a high percentage of satisfaction.

METALWORKING INDUSTRIES

The following excerpts are taken from a report done jointly by the School of Engineering and the Labor Education Center of the University of Connecticut to look ahead to establish the effect the technological changes in metalworking will have on Connecticut's industry in the next ten years.

"Many new metalworking techniques were developed or improved during the 1960's and will find extensive use in the 1970's. Most important of these is numerical control. Others are direct computer control; adaptive control; and electrodischarge, electrochemical, and ultrasonic machining... Employment in metalworking industries is expected to decline from 354,240 in 1968 to 314,700 by 1980. This will be accompanied by a substantial increase in output due to the application of new technology... The change in the number of jobs will not be unifirm by occupation. A rise of 7,050 professional and technical positions are expected. Skilled, or craft jobs, are expected to decline by 5,090. The semi-skilled, or operative jobs, are expected to decline by 17,180...The technical schools in Connecticut have 2,500 students enrolled in metalworking and related courses. An increasing number of high schools are providing vocational courses in this field. Technician training is provided in the two-year technical colleges... Capital investiment will be a major factor in the introduction of new machines and techniques. Management must develop a system to determine the optimum time to introduce new techniques... A more highly educated and trained work force will be required. Educators must have better communication with management and labor to provide the specific needs of the 1970's."

"The technician occupations will require 5,170 new workers during the next decade. A large number of these will come from persons now employed in other metalworking occupations who can move up to the technical level by special education programs or on-the-job training. This number will have to be augmented by youths who are trained in the technical schools and colleges in the state... The four year technical schools in Connecticut have programs for developing the skilled workers of the future. As with technicians, the majority of present skilled machinists and "related" workers have learned their trade informally on the job. The apprentices and technical school training programs have, however, provided the basic core of the skilled work force...The metalworking machine trades apprentice programs now have 2500 enrollees. A substantial number of these apprentices will have to take further training upon completion of their programs to meet the changing structure of the metalworking industries...The technical schools now have 3,500 enrolled in metalworking and related courses. These include 1,000 in industrial electronics; 1,200 a machinists, and 300 as tool and die makers.

PRINTING INDUSTRY

The following excerpts represent a small portion of the information available in the University of Connecticut's Labor Education Center's report on the Occupational Needs, Educational Requirements for the future in Printing Industries in Connecticut.

"Connecticut has 560 printing and publishing firms in 1968 which employ 18,900 workers. Most of these firms are small with only 33 employing more than 100 workers and 44 employing between 50 and 99. This does not include captive printing plants, that is, departments maintained by non-printing firms for their own use only. Nor does it include personnel employed in reproduction services in nearly all other establishments. The value of the output of printing and publishing in Connecticut was $245,000,000 in 1967, more than double the value of $116,000,000 in 1958. The two largest segments of the industry in Connecticut in terms of employment are Commercial Printing, 6,960, and Newspaper Publishing, 6,170...The growth in printing output and the need for more personnel has resulted in critical labor shortages in certain occupations. The time required to train skilled workers runs from two to six years... In 45 occupations studied 9,613 were employed of whom 8,593 were journeymen and 1,200 apprentices. The number employed in these occupations was about half of the total of 18,418 employed in the entire printing inductry in March 1968. The largest groups studied were in composing 2,946 and binding 2.180... The study revealed that there will be a need for 3,499 additional trained workers by 1973. This includes 617 current (1968) job vacancies that is, positions for which employers were actively recruiting 1,936 workers to meet expansion needs, and 946 workers to replace those who retire, die, or otherwise withdraw from printing...By activity, the largest requirements by 1973 are in composing with a need of 1,117 additional workers consisting of 210 for current job vacancies, 551 for expansion and 356 for replacement. Bindery activity has a need for 885 trained workers and lithographic activity has a need for 836 more persons by 1973...The individual occupations with the largest five-year worker needs are bindery worker,hand, 413; bindery worker, machine, 160; compositor, hand, 340; linotype operator228; lithographic pressman, sheet, 184; lithographic pressman, web 131; proofreader 178; letterpress pressman, web, 149; and letterpress pressman, sheet 117...Due to differences in the occupational structure in newspaper printing, a separate table for printing occupations in this segment is shown. The newspapers will have a five year need of 521 additional workers consisting of 85 current vacancies, 231 expansions, and 205 replacements. The remainder of the industry has a five year need of 2,978, consisting of 532 current vacancies, 1,705 expansions, and 741 replacements.

Manpower Needs 1978

Initially it was planned to evaluate the manpower needs up to 1978. The new techniques now being introduced or developed make any detailed occupational estimates beyond the first five-year period quite hazardous. The change-over to the new machines and methods has not been rapid and only a few changes are contemplated in the

near future...The principal developments expected are in composing and printing methods. Another development further on the horizon is electrostatic printing. A shift from hot type(linotype, monotype, etc.) composing to computer and photo-composing, cold type, is contemplated which would result in a lack of growth in the number of linotype operators, make-up men, monotype-casting-machine operators and monotype-keyboard operators, and an increase in photocomposing-machine operators and photocomposing-machine perforator operations...In press operations, there is a continuing shift to offset from letterpress. This will result in a lack of growth in the letterpress occupations and an increase in lithographic preparatory and pressroom occupations...It is difficult to assess the magnitude of these changes by 1978 and therefore its effect on specific occupational needs. Although some decline in numbers of workers in these adversely affected occupations may occur, they will remain fairly stable while the need for workers will grow in other occupations...The survey revealed relatively few printing firms definitely expecting to effect a complete changeover from hot type to photocomposing, or from letterpress to offset printing in the near future. A good number of these firms, however, are studying the possibility of changing the these new methods.

TECHNICAL JOBS

The following excerpt is from an extensive report done by the Labor Education Center of the University of Connecticut designed to determine the technician need by occupation through the mid 1970's and to ascertain their educational requirements.

While manufacturing employment showed little overall change, there were shifts in the occupational structure within the group. The non-production, or what is often referred to as the educated sector, which includes management, sales, engineering, technicians etc., comprised 33.3% of the manufacturing work force in 1970 as compared with 22.4% in 1956. Thus this segment gained 52,000 jobs over the 14 year period, including many in the technician category. Conversely, the number of production jobs dropped by 41,000... Based on census data, the number of technicians in Connecticut, other than those in health related occupations, increased from 2,344 in 1950 to 7,464 in 1960, a gain of 5,120. Data from the 1970 census is not yet available but a much larger increase during the past decade is most likely...A study by the University of Connecticut on occupational changes in the metal working industries projects an increase of 3,000 technicians in these industries...During the economic upturn, the manpower emphasis and shortages will be in the engineering and technician occupations, as they have been in the past. The present period of employment downturn provides a breathing spell during which training should be intensified for those occupations which will be in short supply.

The next pages illustrate the future need and requirements for technicians.

TECHNICIAN NEEDS
HARTFORD AREA
1970 - 1975

Occupation	Total Employed June 1970	N E W Current Vacancies	J O B Expansion by June 1975	N E E D S Withdrawals by June 1975	Total Needs by June 1975
Total	5,811	105	1,028	1,614	2,747
Aeronautical and Aerospace	1,952	0	12	489	501
Architectural & Bldg. Construction	105	7	49	34	90
Chemical	87	1	76	33	110
Civil	141	38	100	60	198
Data Processing	373	1	75	107	183
Electrical	111	3	64	38	105
Electromechanical	31	1	20	10	31
Electronic	1,490	23	322	410	755
Indus. Production - Manufacturing	314	5	31	85	121
Materials - Metallurgical	76	0	11	20	31
Mechanical - Tool	834	20	257	252	529
Nuclear	214	6	0	55	61
Other	83	0	11	21	32

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TECHNICIAN OCCUPATIONS
MINIMUM EDUCATIONAL REQUIREMENTS
STATED BY EMPLOYERS

Occupation	Number of Employer Responses	High School plus Special Courses or On the Job Training	YEARS OF TECHNICAL One	YEARS OF TECHNICAL Two	YEARS OF COLLEGE Four	Baccalaureate Degree Four-Year College
Aeronautical & Aerospace	15	3	1	11	0	0
Architectural	36	5	8	18	4	1
Chemical	122	16	17	75	10	4
Civil	25	1	6	14	4	0
Data Processing	98	1	22	69	4	2
Electrical	105	7	12	76	9	1
Electromechanical	19	2	3	14	0	0
Electronic	110	6	12	87	4	1
Industrial Production	147	34	12	84	9	8
Instrumentation	12	0	2	9	1	0
Metallurgy	85	16	13	47	6	3
Mechanical	349	36	54	216	37	6
Nuclear	8	0	2	5	1	0
Physical Radiology	5	2	2	1	0	0

Annual Manpower Needs

Vocational Education Instructional Occupations

Hartford Labor Market Area

Occupation	Hartford LMA
Distributive	2,100
Creditmen	30
Insurance Agents and Brokers	130
Real Estate Agents	110
Purchasing Agents	50
Truck & Bus Drivers	190
Delivery, Routemen & Cab Drivers	110
Other Sales Workers	1,080
Other Service Workers	400
Health	480
Medical & Dental Technicians	130
Hospital Attendants	240
Practical Nurses	110
Home Economics	300
Cooks, except private household	80
Counter & Fountain Workers	50
Waiters & Waitresses	160
Office	5,680
Accounting Clerks	130
Bookkeepers	300
Bank Tellers	130
Cashiers	270
Office Machine Operators	380
Telephone Operators	80
Mail Carriers	80
Postal Clerks	30
Shipping & Receiving Clerks	30
Secretaries	830
Stenographers	110
Typists	320
Clerical & Kindred, n.e.c.	1,690
Managers, Off., & Prop., n.e.c.	1,290
Technical	220
Surveyors	*
Technicians, n.e.c.	220
Trade & Industrial	2,290
Air Traffic Controllers	*
Draftsmen	50
Radio Operators	*
Craftsmen, Foremen & Kindred	1,780
Semiskilled Metal Workers	160
Semiskilled Textile & Apparel Workers	110

Occupation	Hartford LMA
Asbestos & Insul. Workers	*
Laundry & Dry Cleaning Workers	30
Charwomen & Cleaners	50
Janitors & Sextons	110

CONCLUSIONS AND RECOMMENDATIONS:

It is apparent from this list, and the information alluded to in the occupational briefs that certain occupational groups can accomodate students in their search for jobs, and that many of these jobs are attainable with a high school education. The more important and more pressing fact is that unemployment is a conscious and inavoidable problem which is being faced by many newly graduated students from the high schools. Students in many cases are not getting the direction possible in the high school from their programs, and therefore are not developing the credentials necessary for employability. Present investigation into the dimensions of youth unemployment is hampered by lack of direct evidence demonstrating the various reasons for unemployment. Pointed analysis is virtually impossible since the information available from the State Labor Department can be viewed only in terms of Labor Market Area, or Standard Metropolitan Statistical Area (SMSA). The towns in the Farmington Valley are part of the Hartford SMSA which seriously biases the perspective of employment in the seven towns. Hopefully the upcoming analysis of Occupational Characteristics in the 1970 Census will form a basis for investigation in the seven towns.

A very ambitious suggestion in this case would be to investigate the nature of employment opportunities in the Farmington Valley Region in light of avenues for meaningful orientation for students to the world of work. This calls for a recognition of the developmental nature of the employment picture, and not soley job placement. Job opportunities must be sought with the individual student in mind, recognizing his needs, and affording him an opportunity to assess his own interests and abilities in a particular occupational group. A practical application of this investigation would be a committee of educators and members of civic groups (like the Chamber of Commerce) with the mission of bringing students and careers together.

PART --IV

TRANSPORTATION

TRANSPORTATION

The problems in transporting participating students in the program of course-curriculum sharing in the seven high schools is very complex. The distances involved extend from a short three miles between Avon and Farmington High Schools, to an almost prohibitive distance between Farmington and East Granby High Schools of twenty-one miles.

The approach to surveying the problem of transportation was: (1) to establish the distances and the most probable routes to be used by vehicles travelling among the seven towns; (2) estimate the approximate times between stations; (3) seek the approximate costs of transportation of students by school bus contract; (4) estimate the costs of personally provided transportation, with reimbursement for mileage; (5) investigate the State requirements for insurance, and accident liabilities; (6) and establish a perspective of the State requirements for aid for transportation for participating students.

The distances and most likely routes of travel were compiled from a map of Hartford County provided by the State Department of Transportation, Wethersfield. Estimates of times and costs of travel between stations on a round-trip basis were provided by Mr. Robert M. Goodwin, of Goodwin Bus Company, Windsor Locks.

Estimated costs for personally provided means of transportation were calculated on a round-trip pro rata of ten cents (10) per mile for the approximate distances between stations.

State requirements for insurance and accident liability for school busing contractors and State provisions for aid to transport students to vocational schools was extracted from a compilation of Laws Relating to Education, 1970, in Connecticut by Willis H. Umberger, Chief, Bureau of Federal-State-Local Relations of the Connecticut State Department of Education.

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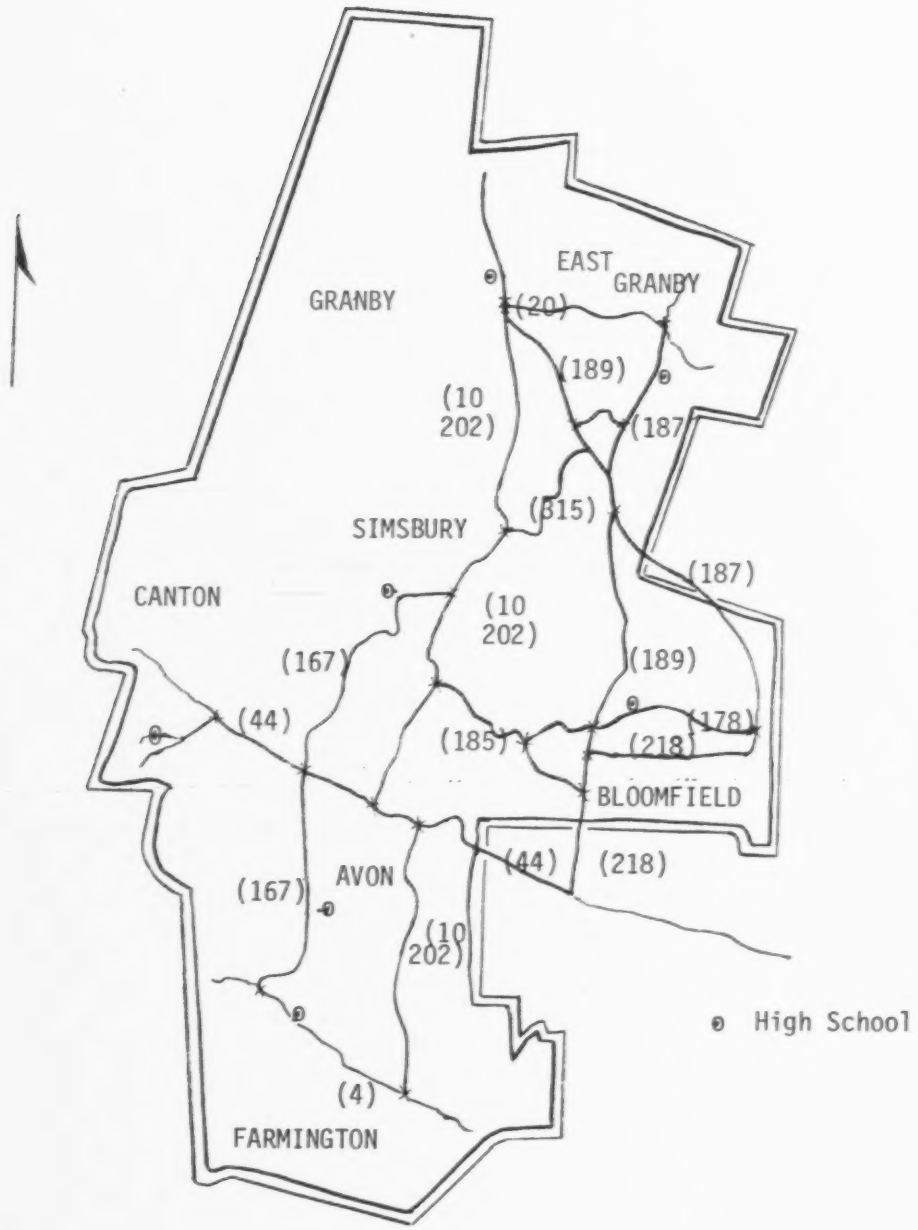

AVAILABLE ROUTES OF TRAVEL FOR HIGH SCHOOLS

FARMINGTON VALLEY REGION

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	AVON	BLOOMFIELD	CANTON	EAST GRANBY	FARMINGTON	GRANBY	SIMSBURY	
AVON	*	12.3	5.5	16.0	3.5	14.7	7.5	miles
		30	15	30	15	30	15	minutes
BLOOMFIELD	12.3	*	12.5	8.3	16.5	10.5	8.0	miles
	30		30	30	30	30	30	minutes
CANTON	5.5	12.5	*	16.0	7.0	16.0	7.5	miles
	15	30		30	15	30	15	minutes
EAST GRANBY	16.0	8.3	16.0	*	21.8	4.5	8.5	miles
	30	30	30		30	15	15	minutes
FARMINGTON	3.5	16.5	7.0	21.8	*	18.0	11.0	miles
	15	30	15	30		30	30	minutes
GRANBY	14.7	10.5	16.0	4.5	18.0	*	7.5	miles
	30	30	30	15	30		15	minutes
SIMSBURY	7.5	8.0	7.5	8.5	11.0	7.5	*	miles
	15	30	15	15	30	15		minutes

(see Appendix X)

ESTIMATED TRAVEL: TIME AND DISTANCE

FARMINGTON VALLEY REGION

TRANSPORTATION COSTS:

PRICE ESTIMATES FOR ROUND TRIP STATION-TO-STATION

FARMINGTON VALLEY REGION

BUS COMPANY CONTRACT COSTS

	A	B	C	E	F	G	S
AVON	*	($40)	$30	($45)	$30	$45	($30)
BLOOMFIELD	($40)	*	$45	$40	$45	($45)	$40
CANTON	$30	$45	*	$45	$30	($45)	($40)
EAST GRANBY	($40)	$40	$45	*	$45	($30)	($30)
FARMINGTON	$30	$45	$30	$45	*	$45	$45
GRANBY	$45	($40)	($45)	($30)	$45	*	$30
SIMSBURY	($30)	$40	($40)	($30)	$45	$30	*

ESTIMATE PROVIDED BY ROBERT M. GOODWIN.
BASED ON COST ANALYSIS OF TIME IN TRANSIT, DISTANCE, AND DRIVER FEE.

ESTIMATE IS FOR STANDARD-SIZED SCHOOL BUS.

CAPACITY OF STANDARD-SIZED SCHOOL BUS- 40 STUDENTS

NOTE: PARENTHESES INDICATE CLOSEST COST ESTIMATE TO INFORMATION SUPPLIED BY GOODWIN BUS COMPANY

(see Appendix X)

TRANSPORTATION COSTS:

PRICE ESTIMATES FOR ROUND TRIP STATION-TO-STATION

FARMINGTON VALLEY REGION

INDIVIDUALLY SUPPLIED TRANSPORTATION

	A	B	C	E	F	G	S	
AVON	*	2.46	1.10	3.20	.70	2.94	1.50	DOLLARS
BLOOMFIELD	2.46	*	2.50	1.66	3.30	2.10	1.60	DOLLARS
CANTON	1.10	2.50	*	3.20	1.40	3.20	1.50	DOLLARS
EAST GRANBY	3.20	1.66	3.20	*	4.36	.90	1.70	DOLLARS
FARMINGTON	.70	3.30	1.40	4.36	*	3.60	2.20	DOLLARS
GRANBY	2.94	2.10	3.20	.90	3.60	*	1.50	DOLLARS
SIMSBURY	1.50	1.60	1.50	1.70	2.20	1.50	*	DOLLARS

ESTIMATE BASED ON PRO RATA: TEN CENTS PER MILE

GROUP COST ESTIMATE:CALCULATE BY MULTIPLYING NUMBER OF STUDENTS BY INDIVIDUAL ROUND TRIP RATE.

SCHOOL BUSES INSURANCE

The State of Connecticut provides for the following insurance limits for contracted school bus services:

> "The amount of insurance or of such bond which each public service motor vehicle or service bus owner or lessee shall carry as insurance or indemnity against claims for personal injury or death shall not be less than (1) twenty-five thousand dollars for one person subject to that limit per person; (2) for all persons in any one accident where the carrying capacity is seven passengers or less, one hundred thousand dollars; (3) eight to twelve passengers, inclusive, one hundred fifty thousand dollars; (4) thirteen to twenty passengers inclusive, two hundred thousand dollars: (5) twenty-one to thirty passengers, inclusive, two hundred and fifty thousand dollars; and (6) thirty-one passengers or more, three hundred thousand dollars; and such policy or such bond shall indemnify the insured against legal liability resulting from damage to the property of passengers or of others to the amount of five thousand dollars,"
> (1949 Rev., S.2371; 1955, S. 1293d; November, 1955, S. N164)

unless the commission (PUC) has found the company to be of sufficient financial responsibility to meet legal liabilities for damages.

PERSONALLY SUPPLIED TRANSPORTATION

Student-supplied transportation represents an agreement between the local school board and the participating student. In this case, the student acts in accord with programs in the high schools existing for transportation of students to the local technical regional high schools. The guardian of the student, therefore is responsible to insure his transport for the amounts designated by state law,unless the student has attained the legal age by the initiation of the pilot program.

In the case of a town wishing to establish an individual contract (or agreement) with a student, willing to transport himself to and from the program facility, a waiver of responsibility is recommended to be established. Each town in the Farmington Valley is insured for any claim to bodily injury through the program of Comprehensive General Liability Insurance each town subscribes to.

Low-cost school insurance policies for individuals are available which for a small sum would cover students for accidents occuring during school hours or while participating in a school activity.

STATE AID: TRANSPORTATION TO VOCATIONAL SCHOOLS

It is important for a clear understanding of the ramifications of state aid to vocational education programs for transportation to first define "vocational schools" in terms of state law.

For our purposes therefore, "vocational schools" are those "public and continuation schools, part-time schools and evening schools for instruction in the arts and practices of vocations". (1967, P.A. 751, S.3.)

The State of Connecticut makes the following provisions for transportation to "vocational schools":

> ...any regional school district shall provide the reasonable and necessary transportation of any student under twenty-one years of age who resides with his parents or guardian in such town or regional school district or who belongs to such town, and who attends a state or state-approved vocational school, other than a technical college, within such town or regional school district as a regular all-day student or as a high school cooperative student, and for any such student who attends any such high school in a town other than the town of his residence, provided, when the cost of such transportation out-of-town would exceed the sum of two hundred dollars per year, said board of education may elect to maintain such student in the town where he attends such vocational school and for the cost of such maintenance in the same manner and to the same extent as in the case of payment for transportation....Where transportation is provided solely withing the town or residence, the board of education thereof shall be reimbursed for fifty per cent of the cost of such transportation not to exceed an average of twenty dollars per pupil annually. The comptroller shall, annually, upon voucher of the secretary of the state board of education, draw his order on the treasurer in favor of any town or regional school district transporting vocational school or vocational agriculture pupils out of town, for a sum equal to one-half the amount paid by it for transportation under the provisions of this section and under such rules as may be prescribed by the state board of education, provided not more than an average of two hundred dollars per pupil shall be paid by the state for the transportation of such pupils.

Programs in vocational education which meet with the approval of the Connecticut Board of Education are eligible for state reimbursement for transportation.

CONCLUSIONS:

The number of students who will be transported will be the most significant factor in determining which method of transportation should be used. Buses seem to be economically feasible only when considering transportation of reasonably large groups of students from station to station. In terms of the longest distances, buses offer the best alternative to concentrating the means of transport, since increasing distances yeild increasingly higher individual costs, but other problems in busing exist which make the effective use of buses on a large scale for this program questionable.

First of these problems would be, transportation of students to their homes after the various programs were finished. The necessity of students returning safely to their homes demands more bus scheduling and increased cost. Another pertainent problem would come with scheduling, both course work and transportation. In this case, a voluntary participatory program would not restrict the program exclusively to school hours. A third apparent problem, is that state aid to transportation is not currently available for regional cooperative vocational education programs. It appears that state reimbursement for student busing would not be available to out-of-town programs unless the home school facilities were non-existent in a particular field. In too many cases, facilities are available in a school, in the Valley, but they can't compare to a better facility in another school--hence a cooperative program, but the state makes no provisions for busing in this situation.

In comparison to the problems of using school busing for transportation, personally-supplied transportation offers some definite advantages(especially in light of the relatively small size of the pilot program). First, personal travel suits smaller numbers. It has been used effectively in all the towns in transporting students the the regional technical high schools. Secondly, it provides real round trip transport for students, to their homes, while not restricting the scheduling for either the hours in school, or after school. The cost of a prorata subsidy of student-supplied transportation is (more economically feasible compared to) the costs of bus transportation for small groups.

RECOMMENDATION:

For the initial stages of the cooperative program, participating students should be offered a prorata sum for supplying their own transportation.

APPENDICES

Student Population Questionnaire.....Appendix I

Special Instructions to Adminsitrator of Questionnaire..Appendix II

Letter: Superintendent of Schools - Disadvantaged.....Appendix III

Letter: Special Education Chairmen - Handicapped.....Appendix IV

Questionnaires: Handicapped - Disadvantaged.....Appendix v

Survey Sheet - Vocational Education School Facilities...Appendix VI

Letter: Information, Apprentice Training.....Appendix VII

Survey Sheet - Work-Study Programs.....Appendix VIII

Letter: Information, Proprietary Schools.....Appendix IX

Letter: Information, Transportation.....Appendix X

This is a questionnaire about career plans: your plans for the future. We are asking these questions because your high school is joining with the other high schools in the Farmington Valley to offer certain career-oriented courses next year. These courses will be made available to you at any one of seven high schools in the region, if sufficient interest is shown by you and other high school students. If you have made definite plans for your future, you can help us by telling us some of the reasons for your choice. If you haven't made a decision, then this questionnaire might help you identify some feelings and ideas you have about your future. Most importantly, it will help us know which courses you might want.

Do not rush, but read the questions carefully before making your answer on the IBM card. This is not a test, but a survey of your ideas. Answer by filling in the bubble next to the letter of the answer you agree with the most. Please do not write on this questionnaire.

PART I

This set of questions will help us learn something about you.

1. I am a:
   a. boy
   b. girl

2. My age next September will be:
   a. 14
   b. 15
   c. 16
   d. 17
   e. 18 or older

3. Next September, I will be in:
   a. 9th grade
   b. 10th grade
   c. 11th grade
   d. 12th grade

4. Are you active in sports, band, or other school sponsored activities?
   a. yes, very active
   b. no, I am really not interested in school activities
   c. I do not have time to participate in school activities

5. Have you ever worked in a business or industry (full or part time, or even just for a short time) this past year?
   a. yes
   b. no

6. In the course groups below, which group do you like the best?
   a. Humanities and Social Studies(English, History, Languages)
   b. Industrial Arts and Skills(Drafting, Woodworking, Metals)
   c. Business Studies(Office Practice, Typing)
   d. Science Studies(Chemistry, Mathematics, Biology)
   e. Home Economics and Art(Foods, Fashions, Child Care, Design)

7. Are you presently taking a course in the group you like best?
   a. yes
   b. no

8. How many Industrial Arts and Skills or Home Economics courses (either whole year or semester courses) have you completed in high school?
   a. I have not taken any
   b. one
   c. two
   d. three
   e. four or more

9. Are there any courses in the Group you checked in Question#6 that are related to what you would like to do for a future job?
   a. Yes, the knowledge I gain from taking this course(one of my favorites) will help in my future career.
   b. I have a lot of interest in this course, but I do not think I will use in to develop my career.
   c. No, the course is more fun for me than anything else.
   d. I am not taking a course in my favorite group.

10. Would you like to see your school offer more new and advanced courses in your favorite group?
   a. yes
   b. I do not think more courses are necessary

11. Have you discussed your educational plans with a counselor?
   a. yes
   b. no

12. Who helped you most to decide which courses to take this year?
   a. A relative (mother, father, brother, sister)
   b. A close friend
   c. A Counselor
   d. A Teacher
   e. I decided for myself

13. Do you feel your Guidance counselor is able to spend enough time with you to help you in your future plans?
   a. yes
   b. no
   c. I do not know

14. Have you visited businesses or industries in your home town area for the purpose of viewing jobs and occupations in the past year?
    a. yes
    b. no

15. Have people from business or industry come to your school to talk to you about job opportunities and training requirements?
    a. yes
    b. no
    c. I am not sure

16. Do you think "career days" and discussions about jobs are good, and really help you know more about career opportunities?
    a. Yes
    b. No
    c. Maybe, but career days and discussions could be done better
    d. I am not interested in these activities

PART II

The next set of questions tries to tell us how you feel about the adult world, and the kinds of work you would be interested in doing. Think about each question, and be honest with yourself. Check the answer that really speaks for you, and fill in the bubble on the answer card.

17. Do you think it is better to be a specialist in a particular occupation or would it be better to have a general all-around knowledge of the occupation?
    a. specialist is better
    b. general knowledge is better
    c. I am not sure

18. When do you think a person should begin to specialize, if he chooses a specific job to work in?
    a. high school
    b. college
    c. on the job
    d. junior high school
    e. I am not sure

19. Which of the following types of careers appeals to you the most?
    a. working with people(sales, social work, teaching)
    b. working with instruments, machines, etc. (technician, mechanic)
    c. I can not really say which I prefer

20. Which of the following would be most important to you in choosing your first job?
    a. high starting pay (with overtime available)
    b. good opportunity to gain experience and learn
    c. friendly co-workers and pleasant working conditions
    d. ability to succeed in the job and satisfy oneself

21. Do you think that college is the only way to a happy, secure future?
    a. yes, without exception
    b. no

22. Which skill would be more important to you?
    a. The ability to use words properly, think logically, speak effectively, appreciate literature
    b. The ability to solve math problems, understand scientific and mechanical principles, have technical skills
    c. both skills are important to develop

23. Do you think the training courses in a skilled trade or industry like welding, electronics, fashion design, or foods and nutrition, if offered to you in high school could ever lead to a secure, high paying position in business or industry?
    a. yes, it could lead to a "top" job
    b. possibly, but it depends on the individual and his experience
    c. no, probably not

24. Do you think most adults are happy in their chosen occupation?
    a. yes
    b. no
    c. I do not know

25. Do you think it is important for YOU to be happy in your chosen occupation?
    a. yes
    b. no
    c. It does not matter
    d. I have not considered it yet

26. How many years after high school do you think you will have to go to school or training programs that will prepare you for the job or career you really want?
    a. I want to be prepared when I graduate from high school
    b. 1 to 2 years (trade, technical school, community college)
    c. 3 to 4 years (apprenticeship or college)
    d. More than 4 years (internship or graduate school)
    e. I have not really considered a future job, or the training I would need.

27. Study the following statements and indicate what reason you might have for choosing a future job or career. Only mark one answer. Choose from the following nine possibilities.
    a. There is a growing need for people with ability and training in this career
    b. This is the career one or both of my parents are involved in
    c. One or more of my friends is working in or seeking this career
    d. I like the equiptment and facilities I would be working with
    e. A great deal of work needs to be done to improve the field

28. a. There are opportunities in this career to be creative
    b. Further training and employment are available in my home town
    c. I have not made up my mind yet
    d. I have another reason not listed here

29. Listed below are Occupational Groups which describe some of of the jobs which you might be interested in. Out of the twenty (20) possibilities below, choose the One Group which you think is closest to the career you are interested in.

    a. AGRICULTURE --farming, forestry, wildlife management
    b. BUILDING TRADES-- carpentry, steelwork, drafting, painting
    c. BUSINESS AND BUSINESS SERVICES--clerical, accounting, data process
    d. CHILD CARE SERVICES--private and public service in child care
    e. COMMUNICATIONS--broadcasting, newspaper journalism, printing

30. a. EDUCATION--teaching, counseling, coaching, writing
    b. FOOD SERVICES--restaurant work, chef, cook, cafeteria management
    c. ENGINEERING--technical development, mechanics, electronics, space
    d. GOVERNMENT SERVICES--elected official, postman, civil service
    e. HOMEMAKING AND HOUSEKEEPING SERVICES--housekeeper, family management

31. a. ART, CREATIVE AND COMMERCIAL--personal talent use, design
    b. INDUSTRIAL MARKETING--sales, buying for stores, economics
    c. LEGAL AID--lawyer, legal secretary, legal aide, court worker
    d. MILITARY SERVICES--Army, Air Force, Navy, Marine Corps, Coast Guard
    e. MUNICIPAL CONTROL AND PROTECTION SERVICES--police, firemen

32. a. OFFICE AND BUSINESS MANAGEMENT--administration, quality control
    b. PERSONAL HEALTH CARE SERVICES--doctor, nurse, LPN, medical technology
    c. GENERAL SERVICES--barber, hairdresser, tailor, florist
    d. RECREATIONAL SERVICES--park supervisor, lifeguard, hotel-motel work
    e. TRANSPORTATION SERVICES--road construction, bus driver, mechanic

33. I could not answer the Occupational Group choices because:
    a. I could not find the group I identify with the most
    b. My college plans do not fit into any of the groups
    c. None of the groups listed were interesting to me
    d. I really have not made up my mind as of this time

PART III

This part of the survey tries to identify what your career interests are in order to determine what kind of courses or special training could be offered that would help you. Listed below are the titles of courses which may be taught if there is enough interest. Answer each one of the titles this way:

*Fill in space "A" if the course is the one course which you would be interested in which would further your career interests.

*Fill in space "B" if the course is the one course which could help, but you are not sure of how much.

*Fill in space "C" if the course would not be useful or interest you.

You should choose two courses which interest you, marking one "A" and the other "B", and fill in "C" for the remaining course selections.

34. Basics of Accounting
35. Aeronautics and the Principles of Flight
36. Air Conditioning and Refrigeration
37. Auto Maintenance and Auto Body Repair
38. Barbering and Hair Styling
39. Carpentry and Construction
40. Commercial Art Techniques
41. Computer Programming and Keypunch
42. Dental Assistant
43. Instruments in Electronics
44. Electronics and Radio Operation
45. Food Management and Preparation
46. Materials (Woods, Metals, Plastics, Concrete)
47. Nurse's Aide, LPN Program
48. Oil Burner Servicing
49. Plumbing Troubleshooting
50. Printing and Advanced Graphics
51. Surveying
52. Secretarial and Office Practices
53. Small Appliance Repair
54. Commercial Vehicle Operation
55. Teacher-Librarian's Aide
56. Some other career or vocational course not mentioned here which would be very necessary for my career
57. Some other career or vocational course not mentioned here which may help to further my career

In addition to the Career and Vocational Courses mentioned in Part III, we are planning to have other skilled people teach certain "mini-skill" courses. These courses will not be for credit and may be taught outside the school for less than one semester (about one marking period) if enough people show interest in this kind of course. Look over the list and show your feelings by:

*Marking "A" if the course sounds very interesting to you.
*Marking "B" if the course is not interesting to you.

Mark each Question either "A" or "B".

58. First Aid Procedures
59. Firefighting Techniques
60. Darkroom Photography
61. Needlecraft
62. Rug Braiding and Hooking
63. Basics of Police Practices
64. Consumer Points of Interest(how and what to buy on the market, department store, and clothing level)

If you have mades future plans for education

If you have definite plans for a future occupation answer Questions #65-66-67. If you are undecided, go to Question #68.

65. Have you ever had any work experience which was the same as, or similiar to, what you have chosen as an occupation?
    a. yes
    b. no

66. Are there businesses or industries in your area where you could gain experience in your chosen occupation?
    a. yes
    b. no
    c. I do not know

67. Would you consider working in this chosen occupation part-time after school, for pay and credit if it could be arranged?
    a. yes
    b. no
    c. I do not know

If you are graduating this June, skip Questions #68-69 and go to Question #70.

68. Would you take a course (like the ones in Questions #34-55) if offered in your high school in place of social studies, math or an elective?
    a. yes
    b. no

69. Would you take a course (like the courses listed) as an extra course, an addition to your schedule?
    a. yes
    b. no
    c. I do not know

70. This is the end of the questionnaire, we would like your opinion about it. Do you think this questionnaire was helpful?

    a. it was an interesting survey, it brought to mind some important things for me.
    b. it was interesting but not helpful
    c. some of the questions were difficult for me to answer properly
    d. it was a waste of time.

SPECIAL INTEREST QUESTION:

Would you like to help students in your high school who might be physically or mentally unable to keep up with everyone else?
    a. yes
    b. no

SPECIAL INSTRUCTIONS FOR THE TEACHER:

If a member of the survey team cannot be present to administer the questionnaire, we ask you to distribute the material, read the Special Instructions (encl.) for the answer card, and answer any questions a student might have. We hope this situation will not arise, but should it so happen, these comments can help solve some confusion:

QUESTIONS 29 to 33: if a student didn't read the instructions carefully he will be confused here. There are 20 possible choices. He should only choose 1 (ONE) from the 20, and indicate his choice.

QUESTIONS 34 to 57: Students have three possible responses, but it is important that students only indicate ONE "A"; ONE "B"; and the remaining either "C" or leave it blank.

QUESTION 46: The word TESTING should be added to the end of the selection to clarify the meaning of the selection.

If a student feels he cannot answer a question by using the choices pointed to, he should leave his answer space blank. This is not a controlled time or information survey, feel free to answer any question a student might have to the best of your knowledge. Please make every effort to accomodate the student's understanding of the survey material.

Thank you for your support.

SPECIAL INSTRUCTIONS FOR THE USE OF THE ANSWER CARD:
can be read to students:

Take your IBM Card and lay it lengthwise on the desk so the Figure 1A is in the upper left-hand corner of the card. In the column directly under 1A, lavelled SECTION fill in_____in the first column, and _____in the second column. These numbers identify your high school. You don't have to record your name anywhere on the card or test.

When you have filled in the two numbers turn the card so the 1A is in the upper right-hand corner, and the yellow is on your right. About half-way down the card you will see ANSWER spaces numbered 1 to 24. Answer these questions, and continue to answer the questions on the other side of the card. When you get to the Special Interest Question, the last one on the survey, make your answer in space #71. Read all the instructions carefully, and take your time. If there are any questions, raise your hand. The questionnaire is not a Test. It's an opportunity for you to give some valuable information, and help develop new programs in your high school.

APPENDIX III

Granby Memorial High School
318 Salmon Brook Road
Granby, Connecticut 06035

June 4, 1972

Mr. Pasquale E. Starble
Superintendent of Schools
Granby Town Hall
Granby, Connecticut

Dear Mr. Starble:

As you know, the Granby School System is involved in a Special Program in developmental Vocational Education to be initiated next September in the Farmington Valley. Bob Lougee and I have been employed to survey the existing programs in the various towns. One of the most important consideration we have to make is the ability of students with low levels of motivation and poor preparation to succeed in an educational setting which leads to development of a marketable skill for the student.

As a result of the direct emphasis placed on Vocational Education priorities by the Amendments of 1968, I'd like to request your assistance in establishing the existing areas in which these priorities are brought to bear.

First and foremost, I'd like to establish the number of "disadvantaged" students in levels 7-12 in your system. In this case I am referring to academic, social-economic and culturally disadvantaged individuals. I am presently conducting a similar survey directed toward the physically, perceptually and emotionally "handicapped" through your Director of Pupil Personnel Services.

We are trying to identify these groups in order to give direct consideration to the individual needs of each student to prevent them from vocational program when with forethought modifications can be ordered to acomodate these needs.

I ask you to comment freely on the questions I have submitted (see enclosure).

It would be a great advantage to us if you could respond immediately as we are limited to a rather short schedule.

Thank you vey much for your time and consideration.

Sincerely,

Peter A. DeLisle, Consultant
Capitol Region Education Council

APPENDIX IV

Granby Memorial High School
318 Salmon Brook Street
Granby, Connecticut 06035

June 4, 1972

Director of Special Education Services
Town Hall
Farmington Valley

The town of Farmington is presently involved in a search for more comprehensive and meaningful approaches to vocation education as a function of career development.

I'm presently polling all the Special Education Departments of the schools involved in the project to assess the dimensions of the existing programs in the schools. Could you return the enclosed questionnaire? The information you could supply us with would be invaluable in the development of special programs for students called "handicapped" who are too often overlooked.

Thank you very much for your help and consideration.

Sincerely,

Peter A. DeLisle, Consultant
Capitol Region Education Council

djs
Enc.

PROJECT SURVEY
INNOVATIVE VOCATIONAL EDUCATION

Handicapped

1. How many "handicapped" students are presently in grades 7-12 in your school system? (grades 7-12, M-F)

2. How many of these students take an active part in the vocational education opportunities in your school system? (grades 7-12, M-F)

3. Has it been necessary to make any modifications in the current programs in vocational education to accomodate these students? Do you foresee a need for program modification or supplimentation? Please comment.

4. Is there any appreciable evidence to indicate the success or failure of your school system to enable the "handicapped" students to achieve the vocational education objectives that would have been otherwise beyond their reach because of their disadvantaged condition?

5. How are the students considered "handicapped" compensated or aided?

Disadvantaged

1. How many "disadvantaged" students are presently in grades 7-12 in your school system? (grades 7-12, M-F)

2. How many of these students take an active part in the vocational education opportunities in your school system? (grades 7-12, M-F)

3. Has it been necessary to make any modifications in the current programs in vocational education to accomodate these students? Do you foresee a future need for program modification or supplimentation? Please comment.

4. Is there any appreciable evidence to indicate the success or failure of your school system to enable the "disadvantaged" students to achieve the vocational education objectives that would otherwise be beyond their reach because of their handicapped condition? Please comment.

5. How are the students considered "disadvantaged" compensated or aided?

APPENDIX VI

Vocational Education School Facilities

Name of School_____ Rm. No. _____ Instructor _____

Describe Present Use of School_____

Size of Room Length____ft. Width____ft. Height of Ceiling _____

Describe Plumbing Facilities Available_____

Describe Electrical Facilities Available_____

Type of floor_____ Number of drains _____

Overhead Door Size _____

Describe other built in facilities (ie, spray booths, hoists)_____

_____

Moveable Equipment _____

No. of woodworking benches _____ No. of vises _____

Describe woodworking power equipment _____

Describe metal working equipment _____

No. of Drafting tables _____ Describe drafting equipment _____

Describe home economic equipment _____

_____

Remarks:

APPENDIX VII

Granby Memorial H.S.
315 Salmon Brook Rd.
Granby, Conn. 06035

June 4, 1972

Mr. James W. Axon
Chief
Apprentice Training Division
Connecticut Dept. of Labor
200 Folly Brook Blvd.
Wethersfield, Connecticut 06109

Dear Mr. Axon:

I would like to request some information from your office concerning entry into the Apprentice Training Programs of the various trades in the state.

I am presently involved in an information gathering survey considering innovative approaches to vocational education in the high schools in the Farmington Valley. In light of this survey, I am interested in finding out the entrance requirements of Apprentice Training Programs, including age minimums; the particular skilled trades these programs prepare an apprentice to participate; and the most recent employment statistics for the various trade which participate in apprentice training programs.

Any other information you might find pertainent to the current applicability of the apprenticeship training programs to our investigation would be greatly appreciated.

Thanks for your time and consideration.

Sincerely,

Peter A. DeLisle
Consultant, CREC
Phone 653-3833

djs

APPENDIX VIII

(This questionnaire was distributed to each of the schools seeking information regarding the cooperative work experience programs in each school)

A significant part of our survey concerns itself with the work-study programs of career education. We would like to learn some aspects of your school and community's efforts to develop a good work-study program. Your answers to the questions listed below will help us derive a better perspective of the present success of your program.

1. How many students are enrolled in some form of cooperative work experience for which the school recognizes an educational benefit?

Ans. _____

2. Is an interview arranged with the prospective employer for the purpose of defining the educational outcomes of the student worker? (select one answer)

a, Yes, in every case _____
b, Sometimes, in _____% of the cases
c, No _____

3. Is there evidence that cooperating employers provide a written job description or list or responsibilities in which the student will be exposed?

Ans. _____

4. Is there evidence of a periodic avaluation performed on each participating student to derive the success of his experience as it relates to his academic standing?

Ans. Yes _____ or No _____

4a, If yes, how many students have been evaluated so far this year? Ans._____
4b, How frequently is the evaluation performed? Ans_____
4c, Is there an evaluation form used for this purpose? Ans ___
4d, Is there evidence that work-study experience has resulted in higher scholastic grades in any subject for the participant? Ans__

5. Do you presently have more students who are willing and able to participate then are employers available? Ans._____

Remarks: You are invited to make any comments or suggestions that you believe may aid our survey which have not been defined above. Thank you for your cooperation.

APPENDIX IX

March 14, 1972

Gentlemen:

Please send me any literature you may have that describes your school program and career possibilities.

Send to:

Robert B. Lougee
Granby Memorial High School
315 Salmon Brook St.
Granby, Conn. 06035

Thank you.

Sincerely,

Robert B. Lougee

djs

APPENDIX X

Granby Mem. H.S.
315 Salmon Brook Rd.
Granby, Conn. 06035
June 4, 1972

Robert M. Goodwin
Goodwin Bus Company
Windsor Locks Garage
Windsor Locks, Connecticut

Dear Mr. Goodwin:

I would appreciate the following data: approximate costs, distance, time in transit, and individual town liabilities for bus transportation and station wagon transportation in the following situations:

Students transported:

From: Avon H.S. to Canton H.S.
Avon H.S. to Granby H.S.
Farmington H.S. to Avon H.S.
Farmington H.S. to Granby H.S.
Canton H.S. to Bloomfield H.S.
Canton H.S. to Farmington H.S.
Canton H.S. to East Granby H.S.
Simsbury H.S. to Farmington H.S.
Simsbury H.S. to Granby H.S.
East Granby H.S. to Farmington H.S.
East Granby H.S. to Bloomfield H.S.
Bloomfield H.S. to Simsbury H.S.
Bloomfield H.S. to Farmington H.S.

If you cannot accomodate us please let me know. I will call later this week to make an appointment to see you again.

Thanks.

Sincerely,

Peter A. DeLisle
Consultant, CREC
Phone: 653-3833

VT 017 733

TONKOWICZ, EDWARD J.

PROJECT YIPPEE AT THE H.C. WILCOX TECHNICAL SCHOOL. FINAL REPORT.

WILCOX (H.C.) TECHNICAL SCHOOL, MERIDAN, CONN.
CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION.
MF AVAILABLE IN VT-ERIC SET.
PUB DATE - 21APR72 21P.

DESCRIPTORS - REHABILITATION PROGRAMS; VOCATIONAL EDUCATION; *TRADE AND INDUSTRIAL EDUCATION; *JOB TRAINING; *CORRECTIONAL REHABILITATION; *YOUTH; *PRISONERS; EDUCATIONAL PROGRAMS; RESEARCH PROJECTS
IDENTIFIERS - *PROJECT YIPPEE

ABSTRACT - THE YOUTH IN PRISON PREPARING EAGERLY TO EARN (YIPPEE) PROJECT WAS A COOPERATIVE EFFORT INVOLVING SEVERAL AGENCIES FOR THE SPECIFIC PURPOSE OF PROVIDING YOUTHFUL OFFENDERS (AGES 16-21) AT THE CHESIRE REFORMATORY WITH A TRAINING PROGRAM WHICH INCLUDED MOTIVATION AND SALEABLE SKILLS IN SELECTED OCCUPATIONS. INMATES WERE SCREENED BY EMPLOYMENT SERVICE COUNSELORS FOR EDUCATIONAL ABILITY, SKILL ABILITY, AND SECURITY RISK AND WERE ASSIGNED TO ONE OF THE SEVEN SHOPS (MACHINE, AUTO, SHEET METAL, PRINTING, DRAFTING, CARPENTRY, AND COOK). THE INMATES SELECTED FOR THE PROJECT RECEIVED PRACTICAL OCCUPATIONAL TRAINING, SHOPWORK, AND THEORY AT A TECHNICAL SCHOOL AND RELATED CLASSROOM WORK AND/OR WORK ASSIGNMENT TO OCCUPATIONAL TRAINING AT THE REFORMATORY. SOME GENERAL COMMENTS BASED ON THREE YEARS OF OPERATION INCLUDE: (1) INMATE CONTACT WITH AN OUTSIDE INSTRUCTOR WAS A CONSTRUCTIVE VEHICLE IN THE REHABILITATION PROCESS, AND (2) SEVERAL INMATES POSSESSED MINIMAL OR VERY LOW ENTRY ABILITIES WHICH EMPHASIZED THE NEED FOR BASIC EDUCATIONAL TRAINING IN SUCH SUBJECTS AS READING AND WRITING. OTHER INFORMATION PERTAINING TO THE OPERATION COMMITTEE, INMATE SELECTION, THE EDUCATIONAL PROGRAM, AND PROGRAM COSTS ARE DESCRIBED IN THIS REPORT. (SB)

VT 017 733

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
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PROJECT YIPPEE

at

THE H. C. WILCOX TECHNICAL SCHOOL

FINAL REPORT

by Edward J. Tonkowicz
H. C. WILCOX TECHNICAL SCHOOL
Oregon Road
Meriden, Connecticut

August 21, 1972

Points of view or opinions stated do not necessarily represent official opinion or policy of state or federal governmental agencies, as the writer is encouraged to express freely his professional judgement in the conduct of the project.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF FOCATIONAL EDUCATION

H. C. WILCOX TECHNICAL SCHOOL
Meriden, Connecticut

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PREFACE

"YIPPEE" - - "Youths In Prison Preparing Eagerly To Earn"

Project YIPPEE was a cooperative effort involving several agencies for the specific purpose of providing the inmates at the Cheshire Reformatory with vocational training and education in an "outside the walls" atmosphere. These youths, ages 16 to 21, had little opportunity at the Cheshire Reformatory to receive training for gainful employment upon their release. Most had a poor educational background and were inadequately prepared for competition in our society. Generally, their respective family backgrounds were far from desirable.

Project YIPPEE was initiated as a pilot program to offset the above dificiencies. The following State of Connecticut agencies cooperated collectively in a concerted effort: The Cheshire Reformatory; The Bureau of Vocational Technical schools; Manpower Office; The Connecticut State Employment Service; Division of Vocational Rehabilitation; Department of Corrections; The H. C. Wilcox Technical School. Various representatives of each of these agencies contributed to the make-up of the project.

INTRODUCTION

This report is intended to provide a synopsis of the objectives of YIPPEE, a brief overview of the training at Wilcox Tech, and a general summary of the success of the program involving the inmates of the Cheshire Reformatory. This was a pilot program inteded to provide youthful offenders, ages 16 thru 21, with an opportunity at vocational training in an "outside" atmosphere.

OBJECTIVE OF YIPPEE

In a cooperative educational and training effort between the Cheshire Reformatory and the Wilcox Technical School, an outside-the-walls training program started in October 1969 and terminated June 30, 1972. The program operated for 32 months.

The objectives, descriptions, and operations as outlined in the September 1970 report, An Evaluation of Project YIPPEE Conducted at the Wilcox Technical School and the Cheshire Correctional Center, elaborates accurately the proceedings which prevailed for the program.

The objective was simple - "to provide youthful offenders at the Cheshire Reformatory with a training program which includes motivation and saleable work skills in selected occupations under this exemplary program operating at both institutions. (A) At Wilcox - practical occupational training-shop work and theory, (B) At Cheshire - related classroom work and/or work assignment to occupational training." It is to this objective that the following is described as viewed from the Wilcox Tech position. Included is a description of candidate selection, the training shops involved, and associated data.

OPERATION COMMITTEE

The Operation Committee of the Wilcox-Cheshire YIPPEE Project, composed of all the state agencies mentioned earlier, met constantly at about 6-week intervals or as needed to evaluate the progress being made. This inter-agency cooperation yielded the best possible solutions to this project which was fraught with some problems.

Some topics covered at the many meetings included the progress of each agency, evaluations, security, phases of training at Wilcox and at Cheshier, ratings, the problems of the inmates, inmate release and the function of the CSES in placement, "good time", follow-up reports by CSES.

Prominent was the problem of security at Wilcox Tech whereby the presence of Cheshire Reformatory officers was mandatory to offset possible inmate escape. The ideal security-free program could not materialize as three escape episodes did occur.

The inevitable transfer of the training program to the within-the-walls at Cheshire was obvious. Training would be made available to the greater majority of inmates at Cheshire regardless of security risks asn would be available for a full day rather than for a limited time as at Wilcox. Space is available for setting up several shops at Cheshire and several visitations by the Wilcox and Vocational Bureau administrators yielded constructive recommendations. Noteworthy is the progress made by the Cheshire administration in consolidating various existing shops and making available space for training. The establishment of the vocational training carpentry shop was a constructive move. The establishmnent of the cook traing program was equally successful. The establishment of truly vocational traing shops in auto, machine shop, printing, small engines, appliance repair, and others

should provide basic training to many for entry into useful employment in the labor market and an opportunity to return to their respective community as self-sufficient members of society.

THE CANDIDATES FOR TRAINING

Candidates for the Wilcox-Cheshire program were selected by the Cheshire Reformatory. Each candidate was tested as having met the minimum standards of educational ability as well as trade ability. Testing was done by the CSES guidance counselor assigned by CSES to Cheshire for the purpose of testing and counseling. Further screening for security ensued. The selected candidates therefore were screened for educational and skill ability and for security risk.

At the outset, the numbers of qualified inmates as back-up trainees assured maximum enrollment in each training shop. However, during the last six months no new trainees were available thereby resulting in very low enrollment. It could be concluded that the candidates were below standard in ability and/or were security risks. The diminishing number of qualified candidates could have well contributed to the need for shifting the training to inside the walls at Cheshire.

GUIDANCE AND COUNSELING

The CSES provided a resident counselor at the Cheshire Reformatory for the expressed purpose of interviewing, testing and counseling candidates for this project. Follow-up studies on each inmate and the positive or negative status following release were informative. There was close and constant cooperation between the training Supervisor at Wilcox Tech and the CSES counselor regarding the entry, withdrawal and progress of each trainee enrolled in the project.

TRAINING AT WILCOX

STAFF

The Wilcox Tech staff included the several shop instructors, one related subjects instructor, and the administration.

Overall administrator was the Wilcox director. The duties of supervising the program was delegated to the adult education supervisor. The latter's duties included hiring and supervising instructors and curriculum, purchasing instructional supplies, counseling trainees as required, working closely with the CSES couselor regarding trainees, and to integrate the instructional program in collaboration with all the state agencies involved.

The shop instructors were certified for their respective trades. Notable was the fact that each shop included an instructor drawn from industry. The role of the shop instructor was most critical in that he helped convey the trade knowledge and helped mold a basic attitude toward the world of work. The comment may be made that "training at Wilcox was 35% trade training and 65% rehabillatation training."

The related trade instructor taught 3 hours daily at Cheshire in the field of mathematics, blueprint reading, and related theory.

SHOPS IN OPERATION

The following shops operated as indicated. For the period September thru June, classes were run from 3:30 to 6:30 p.m. daily. During the summer months training was held from 8 a.m. to 12 noon daily.

1969-70 - Machine, Auto, Sheet Metal, Printing, Drafting

1970-71 - Machine, Auto, Sheet Metal, Printing, Carpentry(summer)

1971-72 - Machine, Auto, Sheet Metal, Printing, Cook*, Carpentry*
(*at Cheshire)

1969-72 - Related trade training in Math, Blueprint Reading, and Theory were provided Sept. thru June at Cheshire.

MACHINE SHOP

The Machine Shop training was conducted basically as an open-ended program whereby new trainees could be entered as the openings occurred.

Training included general machine shop experiences; lathe, milling machine surface grinder, cylindrical grinder, bench work, layout, metal cutting cut-off saw, band saw. The trainees advancement hinged on his personal ability and the length of time he attended.

Many training projects were used to provide a variety of experiences involving the many machines and tools of this department. Inherent in this training was the interpretation of blueprints, trade theory, set-up and operation of equipment, until a final product was completed.

Generally speaking, the trainee would be considered a good machine operator after six months of training. Exceptional trainees could readily be viewed as potential machinists.

It was in the machine shop that there was noted a void with some inmates who had difficulty in reading scales, in simple mathematics, and in reading in general. It was for this reason that the related trade instruction program at Cheshire was initiated. This program is described later.

From the outset through 1971, two groups were being trained at one time in the machine shop requiring two instructors.

AUTO SHOP

The auto shop training was found best when limited to about four to five months for each trainee. The basic training and theory were conducted in the lab where mock-up engines and accessories were torn down and reassembled. There was minimal availability of outside and actual (production) work. This was limited to exhaust systems, tire changes, tire balancing, brake work, or work that could be done within three (3) hours. The regular day school program tied up valuable and limited garage space and thus prevented overnight layover for the Cheshire work. This was understandable but a definite handicap.

However, summer programs were by far more effective because the entire shop "belonged" to the Cheshire trainees. The day school limitations were absent.

It was a general practice to cycle in new groups about three times per year due to the limitations of training cited above.

SHEET METAL SHOP

The sheet metal training included sheet metal layout, and fabrication of a wide variety. The experiences taught paralleled the regular day school instructional program.

It is to be noted that there was an overall greater consistency and least turnover with this group. Generally the length of stay for each participating inmate was longer. Problems with this group were nil.

Training in sheet metal was open-ended, thus permitting new trainees to enter as openings occurred.

PRINTING

At the outset letterpress printing was taught and was followed by instruction in offset printing. Upon evaluation of the opportunities in letterpress, the employment potential was poor. For this reason offset printing training was offered.

Training in offset printing included layout, preparation, camera work, stripping, platemaking, and operation of presses.

As the theory and training were progressive, efforts were made to have new groups start at one time. Or, a group of four or five new trainees could be added periodically for effective teaching by one instructor.

DRAFTING

Machine drafting was started in October 1969 but was short-lived. Reasons for its termination included:

1. Training required at least a one year program for basic entry level competency
2. Adequate trainee numbers could not be maintained for a class size
3. Individual trainee requirements as to mechanical comprehension and draftsman qualities were lacking.

CARPENTRY

Two carpentry programs were offered. The first program was a successful summer program offered in 1971. The program included theory, basic building trades blueprint reading, and practical shop work. Basic manual skills were stressed including safety.

A second carpentry program was initiated in March 1972, within the walls at the Cheshire institution. This was the first breakthrough for true vocational training at Cheshire. Unlike the traditional production work training, this carpentry program is divorced from production. It includes theory and practice and stresses training in the fundamentals of the carpentry trade. It is not tied into the production system typically found in the Cheshire industries.

The latter carpentry program now runs seven hours per day with a regular day instructor on the Cheshire teaching staff.

COOK PROGRAM

The cook training program is the second within-the-walls program instituted at the Cheshire Reformatory in May 1972. Initially, the program was offered four hours per day following the close of the regular kitchen daily.

The instructional outline includes the preparation of foods, including salads, vegetables, meats, gravy, desserts, etc. -- all of which are consumed by the trainees each day.

Regarding adequate instructional supplies for the cook program, as well as for the carpentry program, these were purchased by Wilcox Technical School from funds available under the 933 account.

RELATED TRADE INSTRUCTION

MATH, BLUEPRINT READING, THEORY

In the summer of 1970, a summer program was started to teach basic fundamentals of mathematics and blueprint reading to the machine shop and sheet metal trainees. This program was to provide lacking fundamentals as evidenced in these shops. Training was at Wilcox Technical School.

In the fall of 1970, an instructor was hired to teach a daily three hour program for five days per week in related subjects of math, blueprint reading and theory. Training was within-the-walls at Cheshire, 12:00 Noon to 3:00 P.M.

The curriculum taught paralleled that taught to the regular day student at Wilcox. The same texts were adopted. Needless to say, the related training complemented the shop training at Wilcox.

GENERAL COMMENTS ON THE INSTRUCTION PROGRAM

1. In the opinion of the Wilcox teaching staff, the inmate contact with an "outside" instructor was beneficial. This outside contact was a constructive vehicle in the process of rehabilitating the inmate to the world of work. The process of attitude change should be considered more positive than the actual trade-training itself.

2. The summer program (8:00 A.M. to 12:00 Noon) at Wilcox was more effective than the 3:30 P.M. to 6:30 P.M. program offered September through June. The trainees were wide awake, more responsive, less tired, and had a more receptive attitude for learning.

3. There was a greater effort by the Cheshire Reformatory to place trainees in similar jobs at Cheshire.

4. An exploratory program could not materialize as Cheshire could not provide adequate numbers of applicants.

5. Safety was stressed as an integral part of all shop programs.

6. There was noted of Cheshire inmates minimal or very low entry abilities at times. This points out low educational achievements of the inmates and the need for basic educational training in reading, writing, etc., to ensure reasonable training success.

7. The recommendation by Mr. Walter Verney, Senior VTE Program Officer, from Washington, D.C., that a full-time Director be appointed for this program, can become a reality when the program is operating within-the-walls at Cheshire. A "coordinated" program should evolve.

8. The problem of "Job Orientation" is one which should be resolved to the best interest of the trainee. It is unfortunate that no state agency could act on this.

9. Regarding security at Wilcox, the presence of security officers was mandatory and very costly. The cost to Cheshire was a vital factor in closing the Wilcox operation. The negative responses by inmates regarding their dislike for the presence of security officers is deemed only an expression. There is no evidence to indicate impairment of the educational effort.

10. The cooperation rendered by the CSES counselor in the person of Mr. Butkus contributed to the success of YIPPEE. His role at Cheshire with the selection and counseling of inmates and his cooperation with the Wilcox administration are recognized as praiseworthy.

His periodic reports regarding the status of the released inmates were useful evaluation tools.

COST OF TRAINING (Wilcox Only)

The table below lists the costs for YIPPEE:

School Year	Annual Total	Supplies Minor Equip. Other	Instructional Salaries	Student Laborer, Clerk
Oct. 1969-70	$15,674.40	$4,200.00	$10,560.00	$ 914.40
1970-71	33,617.80	6,097.00	26,332.00	1,188.80
1971-72	40,938.94	12,972.00	23,944.00	4,022.94
Totals		$23,269.00	$60,836.00	$6,126.14
GRAND TOTAL				$90,231.14

10-69 thru 6-30-72

Mr. Butkus' summary ending 6-30-72 indicates that a total of 197 trainees were enrolled in the Cheshire/Wilcox Program since October, 1969. Thus the cost at Wilcox Tech only to train one individual is:

$$\frac{\$90,231.14}{197} = \$457.52 \text{ Training cost per person}$$

RATINGS

Each trainee was rated at intervals by his instructors. His progress was made on a simple check sheet (copy in appendix) providing a scale from poor to excellent. Emphasis was placed upon both personal traits as well as trade progress. A provision was made for instructor comments.

YIPPEE - A COOPERATIVE EFFORT

The YIPPEE project was a cooperative effort involving many agencies including the Bureau of Vocational Technical Schools, Central Office, the Department of Corrections, the Connecticut State Employment Agency, the Cheshire Reformatory, DVR, and Wilcox Technical School.

Since its inception in October, 1969, many meetings were held by the above department members to insure YIPPEE'S success. The reciprocal meetings of the Wilcox Staff, Cheshire Administration, and the Cheshire production staff has yielded results. The EVALUATION by members of Mr. Woods' office was fruitful in its findings. The cooperation and understanding of the teaching staff contributed immeasurably to the success.

According to Dr. Bidwell's report, there arise questions to be answered when the results of the experimental and control groups are evaluated. Her findings do state "qualitative differences in job experiences were noted which supported the advantages of the training program."

The comments of Wilcox instructors concur with Dr. Bidwell's suggestions that inmate behavioral change and attitudes are factors to be dealt with to ensure the inmates a successful return to normal productive life upon release. Persistent follow-up upon release is a necessary must in the post-release months.

REFERENCES

Bidwell, Gloria P., An Evaluation of the Effectiveness of a Vocational Education Program for the Youthful Public Offenders, March 1, 1972

Conn. State Dept. of Educafion, Proposasl For Exemplary Program, 1969

Conn. State Dept. of Education, An Evaluation of Project Yippee Conducted at the Wilcox Technical School and the Cheshire Correctional Center, September 1970.

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Trainee: _____

EVALUATION OF PERSONAL TRAITS

1. INDUSTRY, ENERGY, APPLICATION, WORK HABITS (day to day application)

_____Indifferent; makes little effort.
_____Usually lazy, needs prompting
_____Average Industriousness
_____Hard worker, consistent
_____Exceptional, dilligent, above average.

2. ABILITY TO LEARN ASSIGNED TRAINING

_____Does not have ability for assigned training.
_____Learns slowly; requires repetition for mastery
_____Average ability
_____Above average capacity
_____Exceptional ability & adaptability

3. DEPENDABILITY (Sharing responsibility of assignments)

_____Requires constant supervision
_____Varies at times
_____Requires some direction; assumes responsibility
_____Dependable; needs no discipline
_____Totally dependable & reliable

4. EMOTIONAL STABILITY IN RESPECT TO TRAINING

_____Trainee lacks emotional stability for this training or trade and could be considered unfit or undesirable for this trade.
_____Readily upset, poor control
_____Apathetic, Unresponsive
_____Good balance of control
_____Very good self-control

5. SHOP OR TRADE ABILITY

_____Trainee has apparent ability but does not apply himself
_____Trainee does not qualify for trade based on past progress
_____Below average ability
_____Average
_____Very good
_____Outstanding

6. PROGRESS RATING (%)

_____F Failure - due to lack of application
_____F Failure - due to lack of ability
_____D (60-69) Poor achievement
_____C (70-79) Average achievement
_____B (80-89) Above average
_____A (100-90) Outstanding

7. ESTIMATE OF TRAINEE'S FUTURE SUCCESS

_____Failure
_____Little success
_____May encounter difficulty
_____Average
_____Above average

8. TRAINEE'S APPARENT ATTITUDE TOWARD PRESENT TRAINING.

_____Unfavorable
_____Not unfavorable, but less than desirable.
_____Acceptable - generally good
_____Favorable-attitude adds to effect of training.
_____Definitely favorable-enthusiastic attitude should aid in future employment.

9. COMMENTS AND RECOMMENDATIONS (concerning trainee's fitness for continued training)

_____

_____

_____

_____

_____

_____

_____

_____

_____

FILMED FROM BEST AVAILABLE COPY

HORACE C. WILCOX TECHNICAL SCHOOL
Oregon Road Meriden, Conn. 06450
Phone: 235-6316

TRAINING RECORD

Name of Trainee _____

Occupation for which
training was given: _____

Dates pertinent to rating: _____ Rating No. ____

Date of termination: _____

Unit of Training	Hours	General Rating and Comments

COMMENTS:

Date: _____ Submitted: _____

Assistant Director
Adult Education

VT 017 839
GROWTH AND LABOR CHARACTERISTICS OF MANUFACTURING INDUSTRIES.

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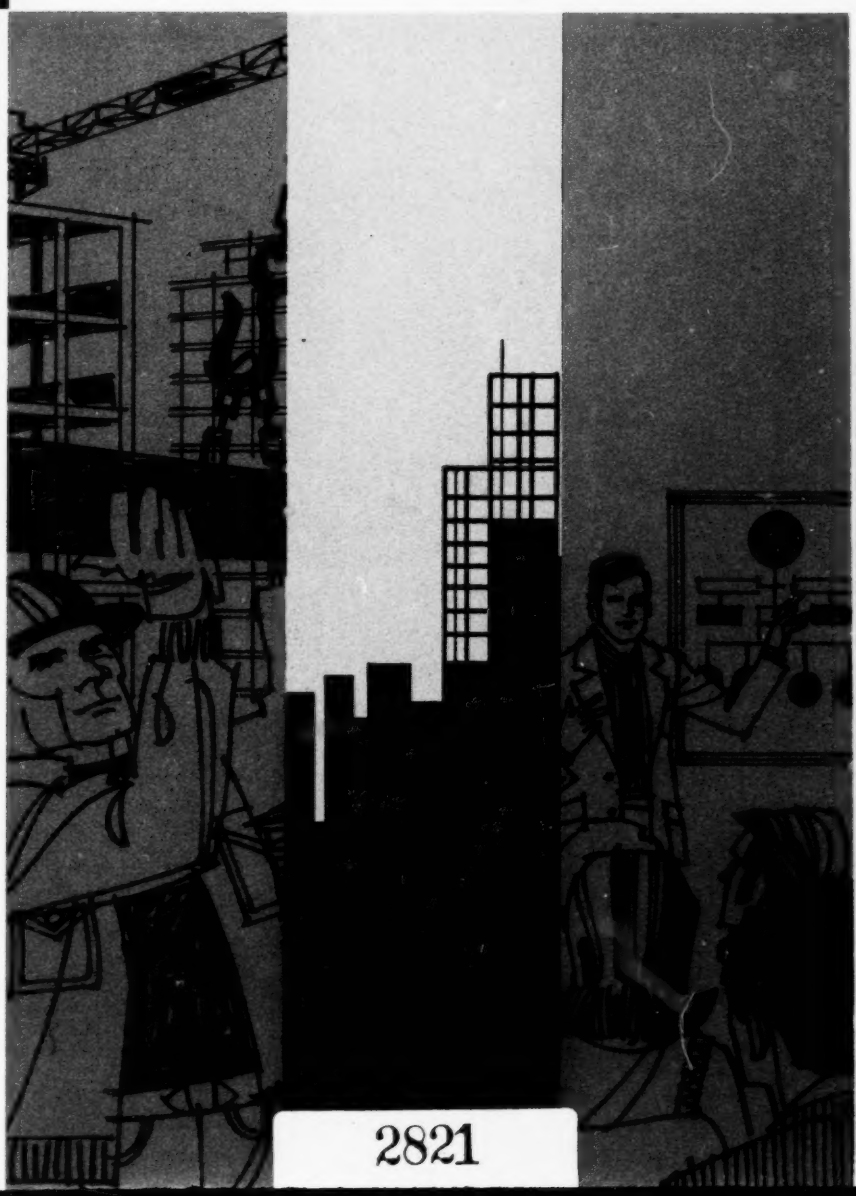
ABSTRACT - FOCUSED ON LABOR AND INDUSTRIAL GROWTH CHARACTERISTICS, THIS STUDY ADDRESSES ITSELF TO INDUSTRIAL DEVELOPMENT PERSONNEL CHARGED WITH THE RESPONSIBILITY OF LOCATING AND ATTRACTING NEW INDUSTRY TO REDEVELOPMENT AREAS. INCLUDED ARE TABLES WHICH ILLUSTRATE: (1) GROWTH AND LABOR CHARACTERISTICS OF SELECTED MANUFACTURING INDUSTRIES, (2) VOLUME OF SHIPMENTS AND GROWTH CHARACTERISTICS OF SELECTED INDUSTRIES AND PRODUCT CLASSES, AND (3) EXAMPLES OF TABLE 1 DATA USE AND A LIST OF THE GROWTH INDUSTRIES WITH SELECTED CHARACTERISTICS. A DESCRIPTION OF THE CONTENTS AS WELL AS KEY SYMBOLS AND CRITERIA USED PRECEDE EACH TABLE. (SN)

VT 017 839

A UNITED STATES
DEPARTMENT OF
COMMERCE
PUBLICATION

GROWTH and LABOR CHARACTERISTICS of MANUFACTURING INDUSTRIES



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Growth and Labor Characteristics of Manufacturing Industries

Prepared for
INDUSTRY STUDIES DIVISION
Office of Deputy Assistant Secretary
for Economic Development Planning
ECONOMIC DEVELOPMENT ADMINISTRATION

By
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Washington, D.C.

EDA-72-59451

MARCH 1972

U.S. DEPARTMENT OF COMMERCE
Peter G. Peterson
Secretary

Robert A. Podesta
Assistant Secretary for Economic Development

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FOREWORD

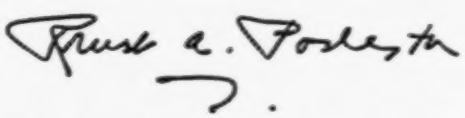
The Public Works and Economic Development Act provides important tools to augment the self-help efforts of areas suffering from chronic unemployment or underemployment.

To stimulate economic growth and to help create new job opportunities in these areas, the Act provides:

- Loans to new or expanding industries;
- Loans and grants to communities for public facilities that are vital if new firms are to get started or existing ones are to expand;
- Technical assistance to help find answers to long-standing economic problems.

Before a redevelopment area can take advantage of these Federal aids, it needs to know where it's going and how it plans to get there.

This publication was prepared to help local economic development groups and others concerned with economic development in their efforts to locate and attract new and expanding industry. The growth characteristics of manufacturing industries provided in this booklet will permit a concentration of these efforts on those industries having the greatest economic development potential.



Robert A. Podesta
Assistant Secretary for Economic Development

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INTRODUCTION

This study is designed as a technical tool and research aid for those working in the industrial development field. Specifically, the study lists manufacturing industries ranked by growth trend and provides supporting information on labor characteristics. Its purpose is to provide a starting point for individuals and agencies in their efforts to locate and attract new industry to redevelopment areas.

While the study responds to a wide variety of questions, the following probably represent those of greatest interest to area redevelopment officials:

- Which industries show growth potential and, therefore, present industrial development opportunities?
- Which industries are declining, or have shrunk substantially from previous peaks, and, therefore, may be troubled by excess production capacity?
- Within a particular industrial category, which industries have the greatest, or least, growth potential?
- Does industry A or industry B have the better growth record?
- How does a particular industry rank in its investment in plant and equipment?
- Which industries are likely to place greatest emphasis on low wage labor? On an abundance of production type workers?
- What is the size of a given industry (or product class) as represented by value of shipments?

The primary emphasis of this study, then, is (1) on industry growth characteristics, because the growing industries are those which will be locating new plants, and (2) on labor characteristics, because those industries that will effectively employ surplus labor are the prime focus of area development activity.

The substance of the study is presented in three tables and attendant explanations. Complete reading of the explanatory material with each table is necessary for effective use of the study.

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TABLE I

Growth and Labor Characteristics of Selected Manufacturing Industries

DESCRIPTION OF CONTENTS

The 411 manufacturing industries in Table I of this study are those with four-digit Standard Industrial Classification (SIC) codes. SIC codes refer to the breakdown of industry into major categories and several stages of subcategories, as defined by the Executive Office of the President, Office of Management and Budget, and as used by the Bureau of the Census. The level of manufacturing industry detail ranges from two-digit codes (major industry groups) to seven-digit codes (products). For example:

Industry breakdown		*Industry product, etc.*
Major industry group	20	Food and kindred products
Industry group	203	Canned and frozen foods
Industry	2033	Fruits and vegetables, etc.
Product class	20331	Fruits
Product	2033113	Applesauce

The Table I industries are rated for growth trends, recent and long-term; the year of peak employment during the 1953-67 period; the percentage decline, if any, from the peak employment year to 1967; capital formation or the relative growth in investment for plant and equipment; and three labor characteristics: average wage rate for production workers, blue collar workers as a percentage of total employment, and labor intensity (production workers wages as a percentage of value added by manufacture).

The industries are grouped in categories according to their recent growth trend—1958 through 1967. The long term trend—1958 versus 1967—is also listed and can be used for comparative purposes. Industries whose data show a sharp contrast between the recent trend and the longer term trend may need more extensive investigation. It is probable, however, that the 1958-67 trend will be the more significant of the two.

Within the growth categories, the industries are listed by SIC code order. In this way, the Table I listing permits quick selection of the top growth industries in each major industry group. For example, the top growth industries among the Food and kindred products industries (SIC 20) are Frozen fruits and vegetables (SIC 2037), which falls in

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the Very High Growth (VHG) category, and two other industries, Dehydrated food products (SIC 2034) and Blended and prepared flour (SIC 2045), which fall in the High Growth (HG) category.

For quick reference, the two-digit SIC codes for major industry groups are as follows:

SIC	*Industry Group*	*SIC*	*Industry Group*
20	Food and kindred products	31	Leather and leather products
21	Tobacco manufactures	32	Stone, clay, and glass products
22	Textile mill products		
23	Apparel and related products	33	Primary metal industries
24	Lumber and wood products	34	Fabricated metal products
25	Furniture and fixtures	35	Machinery, except electrical
26	Paper and allied products	36	Electrical machinery
27	Printing and publishing	37	Transportation equipment
28	Chemicals and allied products	38	Instruments and related products
29	Petroleum and coal products	39	Miscellaneous manufacturing
30	Rubber and plastics products, n.e.c.		

Criteria used and key to symbols

The informational key to each of the columns in Table I and the symbols used are as follows:

Table stub:

1. The SIC code identification of industries.
2. List of industries identified by short descriptive title and grouped by growth categories developed by comparison of average annual employment in the 1958-60 period and the average for 1966-67. The growth categories are as follows:

VERY HIGH GROWTH (VHG): 1966-67 average annual employment versus 1958-60 equals 50-percent gain or better. In other words, average employment for the 2-year period 1966-67 exceeds the average employment for the 3-year period 1958-60 by 50 percent or more. Includes 40 industries.

HIGH GROWTH (HG): 1966-67 average annual employment versus 1958-60 equals 30-percent to 50-percent gain. Includes 59 industries.

MODERATE GROWTH (MG): 1966-67 average annual employment versus 1958-60 equals 10-percent to 30-percent gain. Includes 134 industries.

STATIC (S): average annual employment in 1966-67 rose above 1958-60 by less than 10 percent. Includes 58 industries.

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DECLINING (D): average annual employment in 1966-67 declined from the 1958-60 average. Includes 120 industries, 70 of which declined by less than 15 percent and 50 of which declined by more than 15 percent.

Column Headings

Column (1)—1967 Employment Relative to Peak Year. The peak year for total employment in each industry and the percentage, if any, by which 1967 employment has shrunk from the peak year. The column attempts to provide a rough indication of the amount of excess productive capacity, if any, in a particular industry. This is based on the assumption that the various industries were operating at or near capacity in the peak year, and that any decline from the peak year would indicate the existence of excess production capacity in the industry. The validity of this assumption is reduced by the spread in time between 1967 and the peak year, since the nature or size of an industry's production capacity will change with the gradual abandonment and/or construction of production facilities. On the other hand, a decline from a recent peak year may be of a cyclical or temporary nature.

All of the industries listed as having "Very High Growth" had their peak year in 1967, whereas most of the "Static" and "Decline" industries peaked much earlier.

In summary, 137 industries (33 percent of the total number) reached their employment peak in 1967; 110 industries (27 percent) declined between zero and 10 percent from the peak year; 65 industries (16 percent) declined 10-20 percent; 50 industries (12 percent) declined 20-30 percent; 23 industries (6 percent) declined 30-40 percent; and 26 industries (6 percent) declined over 40 percent. On a cumulative basis, 33 percent of the industries declined not at all, 60 percent declined less than 10 percent, 76 percent declined less than 20 percent, 88 percent declined less than 30 percent, and 94 percent declined less than 40 percent.

Peak years were determined from among those years back through 1953 for which data were available. Peak employment was reached in 1967 by 137 industries, in 1966 by 82, and in 1953 by 53. The remaining 139 industries reached their peak, as many as 24 in 1956 or as few as 2 in 1961, during the 12-year period from 1954-65.

Column (2)—Long Term Growth Trend. Symbols in this column measure growth based on the ratio of the industry's 1967 value added by manufacture to its 1958 value added as related to the all manufacturing industry average. The key to the symbols used is as follows:

VHG: Very high growth, 1967/1958 ratio exceeds 130 percent of

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that for all manufacturing. Includes 47 industries.

HG: High growth, 1967/1958 ratio equals 110 percent to 130 percent of that for all manufacturing. Includes 73 industries.

MG: Moderate growth, 1967/1958 ratio equals 90 percent to 110 percent of that for all manufacturing. Includes 110 industries.

S: Static, 1967/1958 ratio equals 70 percent to 90 percent of that for all manufacturing. Includes 119 industries.

D: Declining, 1967/1958 ratio is less than 70 percent of that for all manufacturing. Includes 61 industries.

Since the symbols describe trends computed by comparing only two points in time, 1958 and 1967, the long term rating may be affected unduly by annual production variations, industry to industry. The trend based on the average annual employment in 1958-60 compared with 1966-67 may on the whole be a more valid indicator of industry growth potential.

Column (3)—Capital Formation. This indicator compares an industry's total gross value of depreciable assets (plant and equipment) at the end of 1963 and 1967, and on a relative basis provides a comparison of one industry with another. The underlying data represent the actual cost of the assets at the time they were acquired. Whenever a plant changes ownership, however, the new owner typically uses an appraised or purchase value. In industries where there have been numerous changes of ownership, the value of the assets may have dropped off substantially. Declining valuation, therefore, to some extent might be the result of accounting practices. On the other hand, the underlying values represent book value (original cost) of fixed assets, and a substantial increase in the data reported for an industry would indicate a major increment of growth in facilities for manufacturing. The data on book value are secured by sampling manufacturing establishments and, at times, may be subject to high sampling variation which, if excessive, leads to withholding of the information. The key to the symbols used to show changes from 1963 to 1967 are as follows:

VH: Very high additional investment in plant and equipment, roughly 85.0 percent or more above the 1963 aggregate book value, by 25 industries.

H: High additional investment over 1963, between 50.0 and 84.9 percent, by 94 industries.

M: Moderate additional investment over 1963, from 25.0 to 49.9 percent, by 150 industries.

L: Low additional investment over 1963, between zero and 24.9 percent, by 87 industries.

VL: Very low or negative investment, from 1963 to 1967, by 28 industries.

Column (4)—Average Wage Rate. This provides a rough indication of the skill levels required of production workers in the industry. An indication of lower skill levels may be important to a community development group whose main objective is to reduce unemployment among a large pool of lesser skilled individuals. On the other hand, an area in which wage rates and skills are above average likely would assemble its list of prospective industries from those that pay high wages. Symbols in this column represent categories based on 1967 annual wage for production workers divided by total hours worked. The key to the symbols used is as follows:

VH: Very high wages, over $3.75 per hour. Includes 18 industries.
H: High wages, $3.25 to $3.74 per hour. Includes 76 industries.
M: Moderate wages, $2.50 to $3.24 per hour. Includes 175 industries.
L: Low wages, $2.00 to $2.49 per hour. Includes 98 industries.
VL: Very low wages, under $2.00 per hour. Includes 44 industries.

Column (5)—Percent Blue Collar. This indicates the importance of production workers relative to managerial, professional, technical, and clerical employees. Industries with a relatively low percentage of blue collar workers will have a correspondingly high proportion of employees of the type that demand superior community amenities and services, such as education, recreation, health, and transportation facilities. High blue collar percentages may indicate industries that are more interested in a large labor supply. Symbols in this column represent categories based on production workers as a percent total employment in 1967. The key to the symbols is as follows:

VH: Very high, 90 percent or more. Includes 36 industries.
H: High, 85-89 percent. Includes 78 industries.
M: Moderate, 70-84 percent. Includes 216 industries.
L: Low, 55-69 percent. Includes 69 industries.
VL: Very low, under 55 percent. Includes 12 industries.

Column (6)—Labor Intensity. This is an indication of the overall importance of labor to a particular industry. Industries whose labor costs are high relative to their total costs will normally have an intense interest in the labor factor as a locational determinant. Whether this type of industry can be attracted to a particular community will depend upon whether its requirements for labor are white collar or blue collar, high skill production or low skill production. All of the labor factors, therefore, should be considered by an economic development group in targeting its efforts toward a select list of industries. (An example

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of one such list is Table III.) Symbols in this column represent categories based on production worker wages as a percent of value added by manufacture in 1967. The key to the symbols is as follows:

VH: Very high, over 50 percent. Includes 15 industries.
H: High, 40-50 percent. Includes 101 industries.
M: Moderate, 25-40 percent. Includes 213 industries.
L: Low, 15-25 percent. Includes 62 industries.
VL: Very low, under 15 percent. Includes 20 industries.

SPECIAL COMMENT

In summary, the criteria used in the tables to describe growth characteristics have proved satisfactory for most of the industries. However, no single criterion for growth can accurately characterize all industries, since the trends in various economic sectors are often divergent. Homebuilding activity during the 1958-62 period was in an extended downtrend, thereby affecting the need for building products as a whole. Out of 24 industries readily identifiable as in building and related products, only one each then was in the VHG and HG groups, 4 were in MG, 14 were in S, and 4 were rated D. Industries in this group as of 1967, broadly speaking, were still on the downgrade, with 17 in 1967 in the static or declining category compared with 18 back in 1962. However, in 1967 a larger number, 12, were classified as declining, whereas only 4 were in decline in 1962. In terms of 1967 dollars, or in constant dollars, the volume of residential construction, a major consumer of building products, averaged in 1961-62 just about the same as the average for 1958-60. By 1969-70, however, though still 3.5 percent down from the 1958-60 level, homebuilding construction was better off, and current forecasts for the 1970's indicate strong expansionary growth, not only in homebuilding, but in most other sectors of the economy.

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
	Very High Growth (VHG)
2037	Frozen fruits and vegetables
2256	Knit fabric mills
2262	Finishing plants, synthetics
2272	Tufted carpets and rugs
2295	Coated fabrics, not rubberized
2327	Men's and boys' separate trousers
2391	Curtains and draperies
2519	Household furniture, n.e.c
2646	Pressed and molded pulp goods
2752	Printing, lithographic
2824	Organic fibers, noncellulosic
2843	Surface active agents
3079	Miscellaneous plastics products
3316	Cold finishing of steel shapes
3339	Primary nonferrous metals, n.e.c
3392	Nonferrous forgings
3399	Primary metal products, n.e.c
3497	Metal foil and leaf
3499	Fabricated metal products, n.e.c
3534	Elevators and moving stairways
3536	Hoists, cranes, and monorails
3537	Industrial trucks and tractors
3541	Machine tools, metal-cutting
3571	Computing and related machines
3589	Service industry machines, n.e.c
3622	Industrial controls
3635	Household vacuum cleaners
3651	Radio and TV receiving sets
3652	Phonograph records
3662	Radio, TV communication equipment
3672	Cathode ray picture tubes
3674	Semiconductors
3679	Electronic components, n.e.c
3742	Railroad and streetcars
3791	Trailer coaches

# of Selected Manufacturing Industries

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1967	0.0	HG	H	L	H	M
1967	0.0	VHG	NA	L	H	M
1967 [3]	0.0	HG	H	M	M	H
1967 [3]	0.0	VHG	VH	L	M	M
1966	−1.1	VHG	M	M	M	M
1966 [2]	−3.2	VHG	NA	VL	VH	H
1966 [2]	−3.4	HG	NA	VL	H	H
1966 [2]	−34.8	MG	VH	L	H	M
1966 [2]	−4.3	MG	NA	M	M	M
1967	0.0	VHG	M	H	M	H
1966 [3]	−3.2	VHG	VH	M	M	L
1967 [3]	0.0	VHG	M	M	VL	L
1967 [2]	0.0	VHG	VH	L	M	M
1967 [2]	0.0	MG	NA	H	M	H
1967 [2]	0.0	VHG	L	H	M	M
1967 [2]	0.0	VHG	VH	H	M	M
1967 [2]	0.0	VHG	H	M	M	M
1967 [3]	0.0	VHG	L	M	M	M
1967 [2]	0.0	VHG	H	M	M	M
1966	0.8	S	M	H	L	M
1967 [3]	0.0	VHG	H	H	L	M
1967	0.0	D	M	M	L	VL
1953	−12.4	VHG	H	H	L	M
1967	0.0	NA	M	H	L	L
1967 [3]	0.0	VHG	M	M	L	M
1956	−46.0	VHG	H	M	L	M
1953	−12.4	HG	H	M	M	L
1966 [3]	−10.4	HG	VH	M	M	M
1967	0.0	MG	VH	L	M	M
1967 [3]	0.0	VHG	M	H	VL	M
1967 [3]	0.0	VHG	VH	M	M	L
1967 [3]	0.0	VHG	H	M	L	M
1967 [3]	0.0	VHG	VH	L	M	M
1953	−11.0	VHG	M	H	M	VH
1967	0.0	VHG	VH	L	H	H

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3799	Transportation equipment, n.e.c.
3831	Optical instruments and lenses
3841	Surgical and medical instruments
3861	Photographic equipment
3953	Marking devices
	High Growth (HG)
2034	Dehydrated food products
2045	Blended and prepared flour
2269	Finishing plants, n.e.c.
2282	Throwing and winding mills
2299	Textile goods, n.e.c.
2339	Women's and misses' outerwear
2385	Waterproof outer garments
2394	Canvas products
2396	Automotive and apparel trimming
2399	Fabricated textile products, n.e.c.
2521	Wood office furniture
2522	Metal office furniture
2542	Metal partitions and fixtures
2645	Die-cut paper and board
2655	Fiber cans, drums, etc.
2731	Book publishing
2732	Book printing
2741	Miscellaneous publishing
2761	Manifold business forms
2789	Bookbinding
2791	Typesetting
2821	Plastic materials and resins
2831	Biological products
2844	Toilet preparations
2879	Agricultural chemicals, n.e.c.
2951	Paving mixtures and blocks
3021	Rubber footwear
3264	Porcelain electrical supplies

# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1967 [2]	0.0	VHG	L	L	M	M
1967	0.0	VHG	VH	M	M	M
1967 [3]	0.0	VHG	VH	M	M	M
1967	0.0	VHG	H	H	L	L
1966 [2]	−2.3	VHG	M	M	L	M
1967 [2]	0.0	HG	H	L	H	M
1964 [2]	−1.3	MG	L	M	M	L
1967 [3]	0.0	HG	H	L	H	M
1967 [3]	0.0	VHG	VH	VL	VH	M
1966 [3]	−11.5	MG	L	L	M	M
1966 [3]	−12.6	MG	H	VL	H	H
1967 [2]	0.0	HG	NA	VL	H	H
1967 [2]	0.0	HG	L	L	H	M
1967	0.0	VHG	H	M	H	H
1966 [3]	−5.6	HG	H	VL	H	M
1967	0.0	HG	H	L	M	H
1967	0.0	HG	M	M	M	M
1966	−11.0	MG	M	M	M	M
1967	0.0	HG	L	M	M	M
1967	0.0	HG	M	M	H	H
1966 [2]	−3.7	HG	M	M	VL	VL
1967	0.0	HG	H	M	M	H
1967	0.0	HG	H	M	VL	L
1967 [3]	0.0	HG	H	M	M	M
1966 [2]	−7.1	MG	M	M	VH	VH
1967 [2]	0.0	MG	H	VH	M	VH
1966	−.3	MG	H	H	L	L
1967 [2]	0.0	VHG	H	M	L	L
1967	0.0	VHG	H	L	L	VL
1967 [3]	0.0	VHG	VH	M	L	VL
1967 [2]	0.0	HG	H	H	M	L
1965	−3.0	S	M	L	H	H
1967	0.0	HG	H	M	M	H

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TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3323	Steel foundries
3361	Aluminum castings
3369	Nonferrous castings, n.e.c.
3449	Miscellaneous metal work
3451	Screw machine products
3479	Metal coating and allied services
3544	Special dies, tools, jigs
3545	Machine tool accessories
3548	Metalworking machinery, n.e.c.
3555	Printing trades machinery
3559	Special industry machinery
3567	Industrial furnaces and ovens
3569	General industrial machinery
3585	Refrigeration machinery
3599	Miscellaneous machinery, nonelectrical
3623	Welding apparatus
3634	Electric housewares and fans
3661	Telephone, telegraph apparatus
3693	X-ray apparatus and tubes
3694	Engine electrical equipment
3699	Electrical equipment, n.e.c.
3713	Truck and bus bodies
3715	Truck trailers
3751	Motorcycles, bicycles, and parts
3821	Mechanical measuring devices
3842	Surgical appliances and supplies
3843	Dental equipment and supplies
3872	Watchcases
3911	Jewelry, precious metal
3931	Musical instruments and parts
3941	Games and toys
	Moderate Growth (MG)
2015	Poultry dressing plants
2022	Cheese, natural and processed
2032	Canned specialties
2036	Fresh or frozen packaged fish

of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−10.0	HG	M	H	M	H
1967	0.0	HG	M	M	H	H
1967	0.0	HG	H	M	M	H
1967 [2]	0.0	HG	M	M	M	M
1967	0.0	VHG	H	M	H	H
1967 [2]	0.0	VHG	H	M	H	H
1966 [3]	−5.6	HG	M	H	M	H
1967 [2]	0.0	VHG	M	H	M	M
1967 [3]	0.0	HG	M	M	M	M
1967	0.0	VHG	M	H	L	M
1967 [2]	0.0	VHG	H	H	L	M
1967 [3]	0.0	VHG	L	M	L	L
1966 [3]	−3.9	MG	L	M	L	M
1967 [3]	0.0	HG	VHG	H	M	M
1967	0.0	VHG	H	M	M	H
1966 [2]	−4.9	HG	H	H	L	M
1966 [3]	−0.2	MG	L	L	M	M
1967	0.0	HG	L	H	M	M
1966 [2]	−2.5	HG	NA	M	VL	L
1967	0.0	HG	H	H	M	M
1966 [3]	−18.1	MG	M	L	M	M
1966	−3.8	HG	M	M	M	H
1966	−18.5	HG	M	M	M	M
1967	0.0	VHG	M	M	M	M
1967 [3]	0.0	HG	M	M	L	M
1967 [3]	0.0	HG	M	M	M	L
1967 [2]	0.0	MG	M	M	M	M
1966 [2]	−9.8	MG	H	M	H	VH
1967	0.0	HG	NA	M	M	M
1966 [2]	−.8	MG	H	M	M	H
1966	−11.6	HG	M	L	M	M
1967	0.0	MG	VH	VL	VH	H
1954	−5.7	MG	M	L	M	M
1966 [3]	−5.9	MG	M	M	M	L
1967 [2]	0.0	MG	NA	VL	VH	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
2044	Rice milling
2063	Beet sugar
2073	Chewing gum
2084	Wines and brandy
2086	Bottled and canned soft drinks
2096	Shortening and cooking oils
2098	Macaroni and spaghetti
2099	Food preparations, n.e.c.
2221	Weaving mills, synthetics
2253	Knit outerwear mills
2281	Yarn mills, except wool
2328	Men's and boys' work clothing
2329	Men's and boys' clothing, n.e.c.
2331	Women's and misses' blouses
2389	Apparel and accessories, n.e.c.
2392	Housefurnishing, n.e.c.
2432	Veneer and plywood
2433	Prefabricated wood structures
2491	Wood preserving
2499	Wood products, n.e.c.
2511	Wood household furniture, except upholstered
2512	Wood household furniture, upholstered
2531	Public building furniture
2541	Wood partitions and fixtures
2599	Furniture and fixtures, n.e.c.
2631	Paperboard mills
2641	Paper coating and glazing
2642	Envelopes
2643	Bags, except textile bags
2647	Sanitary paper products
2649	Converted paper products, n.e.c.
2651	Folding paperboard boxes
2653	Corrugated and solid fiber boxes
2654	Sanitary food containers
2711	Newspapers
2721	Periodicals
2753	Engraving and plate printing
2771	Greeting card publishing

# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1962 [2]	−4.5	MG	M	L	M	VL
1965	−6.5	S	M	M	H	M
1967 [2]	0.0	MG	H	M	M	VL
1967 [2]	0.0	MG	M	M	L	VL
1967	0.0	MG	M	L	VL	VL
1967	0.0	MG	L	H	M	L
1965 [2]	−3.8	MG	M	L	M	L
1954 [2]	−13.6	MG	H	L	M	L
1967 [3]	0.0	MG	H	L	VH	H
1966	−4.2	MG	H	L	H	H
1967 [3]	0.0	MG	H	VL	VH	H
1967 [3]	0.0	MG	H	VL	VH	H
1967 [3]	0.0	HG	H	VL	VH	H
1966	−14.0	MG	NA	VL	VH	H
1966 [2]	−3.4	S	H	VL	M	H
1967	0.0	S	NA	VL	H	H
1966	−5.3	MG	H	M	VH	VH
1966 [2]	−3.0	S	L	M	L	M
1957	−26.1	MG	L	L	M	M
1967 [3]	0.0	HG	M	L	H	H
1966	−1.9	MG	H	L	H	H
1966	−3.5	S	H	L	H	H
1967	0.0	HG	M	L	M	M
1967	0.0	HG	H	M	M	H
1967 [2]	0.0	S	VH	M	M	H
1967 [3]	0.0	MG	M	H	M	M
1967 [2]	0.0	HG	M	M	M	L
1967	0.0	MG	L	M	M	M
1966	−1.7	MG	M	M	M	M
1967	0.0	HG	H	M	M	L
1966	−9.6	MG	M	L	M	M
1966 [3]	−9.2	S	L	M	M	H
1967 [3]	0.0	MG	H	M	M	M
1967 [2]	0.0	S	M	M	M	M
1967	0.0	S	M	H	VL	M
1967	0.0	MG	H	M	VL	VL
1965 [2]	−25.0	S	M	M	M	H
1967	0.0	HG	H	L	L	L

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
2782	Blankbooks and looseleaf binders
2818	Industrial organic chemicals, n.e.c.
2822	Synthetic rubber
2834	Pharmaceutical preparations
2842	Polishes and sanitation goods
2851	Paints and allied products
2871	Fertilizers
2872	Fertilizers, mixing only
2891	Adhesives and gelatin
2893	Printing ink
2899	Chemical preparations, n.e.c.
3069	Fabricated rubber products, n.e.c.
3142	House slippers
3161	Luggage
3199	Leather goods, n.e.c.
3221	Glass containers
3229	Pressed and blown glass, n.e.c.
3272	Concrete products, n.e.c.
3273	Ready-mix concrete
3291	Abrasive products
3293	Gaskets and insulations
3296	Mineral wool
3297	Nonclay refractories
3299	Nonmetallic minerals, n.e.c.
3315	Steel wire and related products
3321	Gray iron foundries
3322	Malleable iron foundries
3334	Primary aluminum
3352	Aluminum rolling and drawing
3356	Nonferrous rolling and drawing
3357	Nonferrous wiredrawing
3362	Brass, bronze, copper castings
3411	Metal cans
3421	Cutlery
3423	Hand and edge tools, n.e.c.

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of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1967 [2]	0.0	MG	H	L	M	M
1966 [2]	−.6	HG	M	VH	L	VL
1966	−4.5	HG	H	VH	L	L
1967 [2]	0.0	MG	M	M	VL	VL
1966 [3]	−6.7	HG	M	M	L	VL
1966 [2]	−1.6	S	M	M	L	L
1953	−5.5	HG	H	M	M	L
1966	−7.6	MG	L	L	L	L
1967 [2]	0.0	MG	M	M	L	L
1966	−4.0	S	M	M	L	L
1967 [3]	0.0	MG	M	M	L	L
1953	−2.3	MG	M	M	M	M
1966 [2]	−8.8	S	M	VL	H	H
1967	0.0	MG	H	L	H	M
1966 [2]	−3.2	S	H	VL	H	H
1967	0.0	S	M	M	H	H
1957	−8.2	HG	H	M	H	M
1966 [3]	−6.1	MG	M	M	M	M
1965 [3]	−2.2	MG	M	M	L	M
1966	22.1	S	M	h	L	M
1967	0.0	HG	L	M	M	M
1966	−6.2	MG	L	H	M	M
1953	−17.5	S	M	H	M	M
1959	−26.4	MG	L	M	M	M
1967 [2]	0.0	MG	NA	M	M	M
1955	−4.2	MG	H	M	H	VH
1953	−10.6	HG	M	H	M	H
1967	0.0	HG	M	VH	M	L
1966	−3.0	MG	H	H	M	M
1967	0.0	MG	H	H	L	M
1967 [3]	0.0	VHG	H	M	M	M
1953	−11.0	HG	M	M	M	M
1967	0.0	MG	M	H	M	M
1953	−24.9	HG	M	M	M	L
1966 [2]	−5.5	MG	H	M	M	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3425	Handsaws and saw blades
3429	Hardware, n.e.c.
3441	Fabricated structural steel
3443	Platework (boiler shops)
3444	Sheet metalwork
3452	Bolts, nuts, rivets, and washers
3471	Plating and polishing
3491	Metal barrels, drums, pails
3494	Valves and pipe fittings
3496	Collapsible tubes
3498	Fabricated pipe and fittings
3519	Internal combustion engines
3522	Farm machinery
3531	Construction machinery
3532	Mining machinery
3535	Conveyors and conveying equipment
3542	Machine tools, metal-forming
3551	Food products machinery
3552	Textile machinery
3553	Woodworking machinery
3554	Paper industries machinery
3561	Pumps and compressors
3562	Ball and roller bearings
3564	Blowers and fans
3565	Industrial patterns
3566	Power transmission equipment
3572	Typewriters
3576	Scales and balances
3579	Office machines, n.e.c.
3581	Automatic merchandising machines
3582	Commercial laundry equipment
3586	Measuring and dispensing pumps
3611	Electric measuring instruments
3612	Transformers
3613	Switchgear and switchboards

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# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−18.2	MG	H	M	M	M
1966	−1.9	MG	M	M	M	M
1967 [3]	0.0	S	M	M	M	M
1967	0.0	MG	M	M	M	M
1966	−5.3	MG	M	M	M	M
1967	0.0	MG	M	M	M	M
1967	0.0	HG	H	M	H	H
1966	−2.5	S	M	M	M	M
1967	0.0	MG	M	M	M	M
1966	−4.4	S	M	L	VH	H
1967	0.0		M	M	M	M
1966 [3]	−0.6	MG	M	H	M	M
1966 [3]	−0.7	MG	L	H	M	M
1967 [3]	0.0	MG	H	H	M	M
1967 [3]	0.0	MG	M	M	L	M
1967 [3]	0.0	HG	M	M	L	M
1967 [3]	0.0	VHG	M	H	M	M
1966	−7.9	MG	L	H	L	M
1966	−7.0	MG	L	M	M	H
1966	−22.1	MG	VL	M	L	M
1967	0.0	HG	M	H	L	M
1966	−0.5	HG	M	M	L	M
1966	−4.2	HG	M	H	M	H
1967	0.0	HG	M	M	M	M
1966 [3]	−10.7	HG	VH	VH	H	VH
1966 [3]	−1.1	HG	M	H	M	M
1967	0.0	VHG	M	M	M	M
1966	−3.0	MG	M	M	L	M
1967 [3]	0.0	MG	L	M	L	L
1962 [2]	−25.4	HG	VL	M	M	M
1966	−3.8	S	VL	M	M	M
1966	−21.0	S	L	M	L	M
1967	0.0	MG	H	M	L	M
1957	−5.2	MG	M	M	M	M
1967 [3]	0.0	MG	M	M	M	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3621	Motors and generators
3624	Carbon and graphite products
3632	Household refrigerators
3641	Electric lamps
3642	Lighting fixtures
3691	Storage batteries
3692	Primary batteries, dry and wet
3711	Motor vehicles, including 3712
3714	Motor vehicles, parts and accessories
3722	Aircraft engines and parts
3731	Shipbuilding and repairing
3732	Boatbuilding and repairing
3741	Locomotives and parts
3822	Automatic temperature controls
3851	Ophthalmic goods
3871	Watches and clocks
3912	Jewelers' findings and materials
3949	Sporting and athletic goods, n.e.c.
3952	Lead pencils and art goods
3964	Needles, pins, and fasteners
3993	Signs and advertising displays
3999	Manufactures, n.e.c.
2013	Sausages and other prepared meats
2035	Pickles, sauces, and salad dressings
2043	Cereal preparations
2046	Wet corn milling
2061	Raw cane sugar
2071	Confectionery products
2087	Flavoring extracts, n.e.c.
2111	Cigarettes
2141	Tobacco stemming and redrying
2254	Knit underwear mills
2284	Thread mills
2291	Felt goods, n.e.c.
2293	Paddings and upholstery filling
2298	Cordage and twine

# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−18.4	MG	M	M	M	M
1967 [2]	0.0	MG	M	M	M	M
1966 [3]	−1.7	MG	M	H	M	M
1967	0.0	MG	VH	M	H	M
1966	−0.2	HG	H	M	M	M
1966	−0.5	MG	L	M	M	M
1953	−10.6	VHG	H	L	M	L
1966	−7.4	HG	VL	VH	M	M
1966	−6.7	HG	H	H	M	M
1967	0.0	MG	H	H	L	M
1967	0.0	S	M	H	M	VH
1966	−1.0	MG	L	L	H	H
1953	−44.1	HG	L	VH	M	M
1965 [3]	−4.0	S	L	M	M	M
1967	0.0	HG	M	M	M	M
1967	0.0	HG	M	L	M	M
1956 [2]	−9.8	HG	NA	L	M	M
1967	0.0	S	H	L	M	M
1966	−4.8	MG	L	L	M	M
1953	−27.5	MG	M	L	M	M
1966	−1.0	MG	H	M	M	M
1967 [3]	0.0	MG	H	L	M	M
1967	0.0	MG	H	M	M	M
1953	−14.7	MG	VL	L	M	L
1967	0.0	MG	M	H	M	L
1967	0.0	S	M	H	M	L
1964 [2]	−7.1	MG	L	L	M	M
1956	−1.5	MG	H	L	M	M
1953	−14.2	HG	M	M	L	VL
1959	−.5	S	M	M	VH	VL
1954 [2]	−15.4	S	L	VL	H	M
1953	−24.6	S	M	VL	H	H
1953	−23.0	S	L	L	H	M
1955 [2]	−26.2	S	L	L	M	M
1954 [2]	−28.6	S	L	L	M	M
1953	−26.6	S	L	L	H	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
2311	Men's and boys' suits and coats
2321	Men's and boys' shirts and nightwear
2322	Men's and boys' underwear
2335	Women's and misses' dresses
2337	Women's and misses' suits and coats
2341	Women's and children's underwear
2369	Children's outerwear, n.e.c.
2384	Robes and dressing gowns
2386	Leather and sheep lined clothing
2426	Hardwood dimension and flooring
2429	Special product sawmills, n.e.c.
2431	Millwork
2515	Mattresses and bedsprings
2611	Pulpmills
2621	Papermills, except building
2815	Cyclic intermediate and crudes
2816	Inorganic pigments
2892	Explosives
3011	Tires and inner tubes
3151	Leather gloves and mittens
3171	Women's handbags and purses
3211	Flat glass
3231	Products of purchased glass
3295	Minerals, ground or treated
3312	Blast furnaces and steel mills
3317	Steel pipe and tubes
3341	Secondary nonferrous metals
3391	Iron and steel forgings
3442	Metal doors, sash, and trim
3461	Metal stampings, including automotive
3481	Miscellaneous fabricated wire products
3492	Safes and vaults
3493	Steel springs
3533	Oilfield machinery

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# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1967	0.0	S	NA	L	H	H
1967	0.0	S	H	VL	VH	H
1962 [2]	−19.3	MG	NA	VL	VH	H
1967	0.0	S	NA	L	H	H
1957 [2]	−16.9	S	NA	L	H	M
1957 [2]	−5.6	S	M	VL	H	H
1957	−17.5	S	NA	VL	VH	H
1962 [2]	−14.4	S	H	VL	H	H
1954 [3]	−5.6	S	NA	L	H	H
1965 [3]	−8.2	S	M	VL	VH	VH
1954 [2]	−2.7	S	VL	L	VH	VH
1955	−12.2	S	H	M	M	H
1956	−9.3	S	L	L	M	M
1966 [3]	−5.0	MG	M	VH	M	M
1967 [3]	0.0	S	M	H	M	M
1957 [2]	−17.8	MG	M	H	L	L
1957	−5.3	S	M	H	M	L
1967 [2]	0.0	VHG	H	H	M	H
1955	−6.1	S	M	VH	M	M
1963 [2]	−18.2	S	L	VL	H	H
1964	−2.8	S	H	VL	VH	H
1959	−12.5	S	M	VH	M	M
1966	−1.4	S	M	M	M	M
1953	−11.0	D	H	M	M	M
1956 [2]	17.3	S	M	VH	M	M
1967	0.0	S	L	H	M	M
1956	−4.4	MG	L	M	M	M
1953	−26.3	MG	M	VH	M	H
1967	0.0	S	L	L	M	M
1966	−0.1	S	VH	H	M	H
1953	−8.6	S	L	M	M	M
1967 [2]	0.0	MG	H	H	L	L
1955	−21.4	MG	H	M	M	H
1956	−23.8	S	M	M	L	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3629	Electrical industrial goods, n.e.c.
3631	Household cooking equipment
3633	Household laundry equipment
3643	Current-carrying wiring devices
3644	Noncurrent-carrying devices
3721	Aircraft
3914	Silverware and plated ware
3951	Pens and mechanical pencils
3955	Carbon paper and inked ribbons
3991	Brooms and brushes
	Declining (D)
2011	Meatpacking plants
2021	Creamery butter
2023	Condensed and evaporated milk
2024	Ice cream and frozen desserts
2026	Fluid milk
2031	Canned and cured seafoods
2033	Canned fruits and vegetables
2041	Flour and grain mill products
2042	Prepared animal feeds
2051	Bread and related products
2052	Cookies and crackers
2062	Cane sugar refining
2072	Chocolate and cocoa products
2082	Malt liquors
2083	Malt
2085	Distilled liquor, except brandy
2091	Cottonseed oil mills
2092	Soybean oil mills
2093	Vegetable oil mills, n.e.c.
2094	Animal and marine fats and oils
2095	Roasted coffee
2097	Manufactured ice
2121	Cigars
2131	Chewing and smoking tobacco
2211	Weaving mills, cotton
2231	Weaving, finishing mills, wool
2241	Narrow fabric mills

# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1957	−20.8	S	VH	M	M	M
1965 [3]	−1.9	S	M	M	M	M
1953	−19.0	D	M	H	M	M
1960 [3]	−4.3	MG	H	M	M	M
1966 [3]	−5.8	S	M	M	M	M
1957	−30.4	S	VH	H	L	M
1953	−17.7	MG	M	M	H	M
1966 [2]	−4.1	S	L	L	M	M
1967 [2]	0.0	S	M	M	L	M
1959	−1.7	S	M	L	M	M
1956	−23.6	D	L	H	M	H
1954 [2]	−58.6	D	VL	L	M	M
1960 [2]	−5.0	MG	M	M	M	L
1954 [2]	−32.6	D	L	M	L	L
1958 [2]	−22.1	D	L	M	VL	L
1963 [2]	−8.7	S	L	L	H	M
1957	−25.6	S	M	L	H	M
1953	−34.3	D	L	M	M	L
1954	−11.0	S	M	L	L	L
1957	−15.6	S	L	M	L	M
1953	−10.0	S	L	M	M	L
1954	−28.4	MG	L	H	M	L
1953	−17.6	S	H	M	M	L
1953	−29.7	S	M	VH	L	L
1960 [2]	−25.9	D	L	VH	M	M
1956	−11.4	S	L	H	M	VL
1953	−62.5	D	VL	VL	M	M
1959	−1.2	S	M	M	L	L
1954 [2]	−54.1	D	L	M	M	L
1958	−6.2	S	VL	M	L	M
1958 [2]	−13.8	S	M	H	L	VL
1954 [2]	−62.2	D	VL	L	L	M
1953	−53.2	D	M	VL	VH	M
1954	−52.0	D	M	L	M	L
1954 [2]	−31.5	S	L	L	VH	VH
1954 [2]	−37.3	D	L	L	H	H
1953	−9.7	S	M	L	H	H

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
2251	Women's hosiery, except socks
2252	Hosiery, n.e.c.
2259	Knitting mills, n.e.c.
2261	Finishing plants, cotton
2271	Woven carpets and rugs
2279	Carpets and rugs, n.e.c.
2283	Wool yarn mills
2292	Lace goods
2294	Processed textile waste
2296	Tire cord and fabric
2297	Scouring and combing plants
2323	Men's and boys' neckwear
2342	Corsets and allied garments
2351	Millinery
2352	Hats and caps, except millinery
2361	Children's dresses and blouses
2363	Children's coats and suits
2371	Fur goods
2381	Fabric dress and work gloves
2387	Apparel belts
2393	Textile bags
2395	Pleating and stitching
2397	Schiffli machine embroideries
2411	Logging camps and contractors
2421	Sawmills and planing mills
2441	Nailed wooden boxes and shook
2442	Wirebound boxes and crates
2443	Veneer and plywood containers
2445	Cooperage
2514	Metal household furniture
2591	Venetian blinds and shades
2644	Wallpaper
2652	Setup paperboard boxes
2661	Building paper and board mills
2751	Printing, except lithographic
2793	Photoengraving
2794	Electrotyping and stereotyping

of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−18.9	S	L	VL	VH	H
1953	−35.1	D	L	VL	VH	H
1966 [2]	−18.9	S	VL	L	VH	H
1958 [3]	−27.4	D	L	L	M	H
1959 [3]	−55.8	D	VL	L	H	M
1958 [3]	−22.5	MG	VH	L	H	L
1962 [3]	−21.0	D	VL	L	H	H
1955 [2]	−39.0	D	M	L	H	VH
1955 [2]	−33.8	D	VL	VL	H	H
1959 [3]	−22.3	S	M	L	VH	H
1959 [2]	−30.6	D	L	L	H	VH
1957 [2]	−23.5	S	NA	L	M	M
1956	−13.6	S	NA	VL	H	M
1957	−63.9	D	NA	L	H	H
1959 [2]	−30.2	D	VL	VL	H	H
1965	−7.1	S	NA	VL	H	H
1954 [2]	−24.3	D	H	VL	H	H
1954 [2]	−15.0	D	NA	H	H	H
1961 [2]	−13.0	S	H	VL	VH	H
1955 [2]	−35.6	D	VL	VL	M	M
1954	−24.8	MG	H	VL	H	M
1964	−25.4	MG	NA	L	VH	VH
1965 [2]	−11.5	S	VL	L	VH	H
1956	−21.6	MG	M	L	VH	H
1953	−52.4	S	L	L	VH	H
1959 [3]	−18.5	S	H	L	VH	H
1966 [3]	−14.5	S	L	VL	VH	H
1956 [2]	−54.2	D	M	VL	VH	VH
1953	−44.9	S	M	M	H	H
1957	−13.9	S	M	L	M	M
1956 [2]	−23.2	S	L	L	M	M
1954 [2]	−36.1	D	VL	M	M	M
1958 [3]	−10.2	D	VL	L	H	H
1959 [3]	−33.1	D	M	M	H	M
1957	−19.7	D	M	M	M	H
1957	−31.6	D	VH	VH	M	H
1957	−56.1	D	VL	VH	M	H

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
2812	Alkalies and chlorine
2813	Industrial gases
2819	Industrial inorganic chemicals, n.e.c.
2823	Cellulosic manmade fibers
2833	Medicinals and botanicals
2841	Soap and other detergents
2861	Gum and wood chemicals
2895	Carbon black
2911	Petroleum refining
2952	Asphalt felts and coatings
2992	Lubricating oils and greases
2999	Petroleum and coal products, n.e.c.
3031	Reclaimed rubber
3111	Leather tanning and finishing
3121	Industrial leather belting
3131	Footwear cut stock
3141	Shoes, except rubber
3172	Personal leather goods
3241	Cement, hydraulic
3251	Brick and structural clay tile
3253	Ceramic wall and floor tile
3255	Clay refractories
3259	Structural clay products, n.e.c.
3261	Vitreous plumbing fixtures
3262	Vitreous china food utensils
3263	Fine earthenware food utensils
3269	Pottery products, n.e.c.
3271	Concrete block and brick
3274	Lime
3275	Gypsum products
3281	Cut stone and stone products
3292	Asbestos products
3313	Electrometallurgical products
3331	Primary copper
3332	Primary lead

# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−12.7	S	L	H	L	L
1953	−8.8	HG	H	H	VL	VL
1954 [2]	−45.9	S	M	H	L	L
1958 [3]	−25.1	S	M	M	M	M
1953	−48.5	S	M	H	L	L
1963 [3]	−1.6	S	L	H	L	VL
1953	−31.4	D	L	M	M	L
1953	−22.2	S	M	H	M	L
1953	−33.1	HG	L	VH	M	VL
1953	−17.7	S	VL	M	M	M
1964 [2]	−15.1	MG	VL	M	VL	VL
1960 [2]	−64.5	D	VL	M	M	L
1956	−48.5	D	L	H	M	M
1953	−33.8	D	L	M	H	H
1960	−59.7	D	VL	M	M	M
1957	−39.1	D	NA	L	H	H
1953	−14.6	S	M	L	VH	H
1966 [2]	−18.6	S	H	VL	M	M
1957	−21.6	D	L	H	M	L
1956	−22.1	D	M	L	H	H
1959	−26.4	D	L	L	M	M
1956	−29.2	S	L	M	M	M
1954 [2]	−34.0	D	L	M	M	H
1956 [2]	−26.3	D	VL	H	M	H
1954 [2]	−19.5	S	M	L	H	H
1953	−59.6	D	VL	L	VH	VH
1959 [2]	−24.0	D	L	L	H	H
1965 [3]	−14.6	S	L	M	L	M
1956	−18.1	S	M	M	H	M
1956	−19.4	D	L	M	M	L
1955 [2]	−25.6	D	L	M	H	H
1955	−10.1	S	M	M	M	M
1956	−35.4	D	L	H	M	M
1960	−28.0	S	M	H	M	L
1953	−42.6	S	VH	M	M	M

TABLE I: Growth and Labor Characteristics

SIC code	Industry (Recent growth trends)
3333	Primary zinc
3351	Copper rolling and drawing
3431	Metal sanitary ware
3432	Plumbing fittings, brass goods
3433	Heating equipment, nonelectric
3446	Architectural metalwork
3511	Steam engines and turbines
3636	Sewing machines
3639	Household appliances, n.e.c.
3671	Electron tubes, receiving type
3673	Electron tubes, transmitting
3729	Aircraft equipment, n.e.c.
3811	Scientific instruments
3913	Lapidary work
3942	Dolls
3943	Children's vehicles
3961	Costume jewelry
3962	Artificial flowers
3963	Buttons
3994	Morticians' goods
3996	Hard-surface floor coverings

NA—not available
n.e.c.—not elsewhere classified
1—1953 is earliest covered year
2—1954 is earliest covered year
3—1958 is earliest covered year

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# of Selected Manufacturing Industries cont.

1967 Employment relative to peak year [1]		Longterm growth trend	Capital formation	Average wage rate	Percent blue collar	Labor intensity
Peak year	Percent decline					
(1)		(2)	(3)	(4)	(5)	(6)
1953	−29.0	MG	M	M	M	M
1956 [2]	−11.4	S	M	H	M	M
1953	−47.1	D	L	H	M	M
1953	−11.0	S	L	M	M	M
1959 [3]	−13.1	D	L	M	M	M
1958 [2]	−8.1	D	H	M	M	M
1958 [3]	−20.1	D	M	VH	L	M
1953	−60.0	S	L	H	M	M
1958 [3]	−8.2	S	L	M	M	M
1959 [3]	−43.9	D	VL	M	H	M
1962 [3]	−27.2	S	L	M	L	M
1958 [3]	−4.0	S	L	H	L	M
1960	−16.8	D	VH	M	L	M
1961 [2]	−9.5	HG	NA	M	H	L
1957	−42.5	D	L	VL	VH	H
1955 [2]	−44.8	D	L	L	H	M
1955 [2]	−23.8	S	H	L	H	M
1954 [2]	−28.8	D	H	VL	H	M
1956 [2]	−44.2	D	VL	L	H	M
1953	−9.0	D	M	L	M	M
1953	−4.2	S	M	H	M	L

TABLE II

Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes

DESCRIPTION OF CONTENTS

The information in Table II augments that in Table I, presenting growth and value of shipments data for the 411 industries (four-digit SIC code) and for 1,110 product classes (five-digit SIC code) for the 1964/65-1967/68 period. The inclusion of product classes provides growth categorization at a finer level of industrial detail than exists in Table I.

Industries that appear to have merit based on information in Table I should be checked against Table II to determine that part of the industry (if there is more than one part) having the greatest growth potential, and to determine the industry's or product class's relative size based on value of shipments. An extremely small industry or product class will have relatively little area development potential despite its rising trend. Conversely, a large industry that is declining may likewise offer very little developmental aid.

The listing of Table II industries by order of Standard Industrial Classification (SIC) also affords the user the means conveniently to cross-check on a particular industry for reference to the labor information shown in Table I, through use of the growth-category symbol.

Criteria used and key to symbols

The 411 industries (four-digit SIC code) and 1,110 product classes (five-digit SIC code) are listed in their Standard Industrial Classification code order. The volume of shipments is stated for 1968.

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Industry (four-digit) growth categories are identicial with the growth categories in Table I.

Product class (five-digit) growth categories, however, are based on trends in value of shipments as follows:

VHG: Very High Growth, 1967-68 average annual value of shipments versus 1964-65 equals 150 percent gain or better. Includes 118 product classes.

HG: High Growth, 1967-68 average annual value of shipments versus 1964-65 equals 40-150 percent gain. Includes 209 product classes.

MG: Moderate Growth, 1967-68 average annual value of shipments versus 1964-65 equals 10-40 percent gain. Includes 459 product classes.

S: Static, 1967-68 average annual value of shipments versus 1964-65 equals 4.9-percent decline to 10-percent gain. Includes 196 product classes.

D: Declining, 1967-68 average annua' value of shipments versus 1964-65 equals 5 percent and greater decline. Includes 128 product classes.

Since industry (four-digit) growth trend rankings are based on employment data for the periods 1958-60 and 1966-67 whereas product class growth trends are based entirely on value of shipments (which is affected by price volatility) during a shorter and somewhat different time period, there are apparent differences between the industry growth rank and the ranks of the industry's product class components. The employment concept used for the industries is considered the more reliable growth indicator, but employment data are not available for product classes on a historical basis.

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2011–	Meatpacking plants	15,304.6	D
20111	Beef, not canned nor sausage	8,079.9	MG
20112	Veal, not canned nor sausage	294.4	S
20113	Lamb and mutton, not canned nor sausage	310.9	S
20114	Pork, fresh and frozen	2,865.8	MG
20115	Lard	152.5	D
20116	Pork, processed (not canned nor sausage), made in meatpacking plants	1,332.2	S
20117	Sausage and similar products (not canned) made in meatpacking plants	1,067.3	MG
20118	Canned meats (except pet food) containing 20 percent or more meat, made in meatpacking plants	539.5	S
20119	Hides, skins, and pelts	267.2	MG
20110	Miscellaneous meatpacking by-products	394.9	HG
2013–	Sausages and other prepared meats	2,757.5	S
20136	Pork, processed or cured (not canned nor sausage), not made in meatpacking plants	750.9	HG
20137	Sausage and similar products (not canned) not made in meat-packing plants	1,380.4	MG
20138	Canned meats (exc. pet food) containing 20 percent or more meat, not made in meatpacking plants.	385.7	MG
20139	Natural sausage casings	86.0	D
20130	Meat processing plant products, n.s.k.	154.5	HG
2015–	Poultry dressing plants	2,935.1	MG
20151	Hens (or fowl) and chickens	2,005.6	MG
20153	Turkeys	510.4	MG
20154	Processed poultry, except soups	139.4	VHG
20155	Other poultry and small game	19.6	S
20156	Liquid, dried, and frozen eggs	170.6	S
20150	Poultry plant products, n.s.k.	89.5	HG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2021-	Creamery butter	824.7	D
2022-	Cheese, natural and processed, including 20220, n.s.k.	1,620.1	MG
20221	Natural, except cottage cheese	942.0	MG
20222	Process cheese and related products	571.2	MG
2023-	Condensed and evaporated milk	1,439.0	D
20231	Dry milk products	708.2	MG
20232	Canned milk products (consumer)	413.5	MG
20233	Condensed milk (shipped in bulk)	81.0	S
20234	Ice cream mix and ice milk mix	219.7	MG
20230	Condensed and evaporated milk, n.s.k.	17.5	VHG
2024-	Ice cream and frozen desserts	1,327.4	D
2026-	Fluid milk	6,821.4	D
20261	Bulk fluid milk and cream	1,029.9	S
20262	Packaged fluid milk and related products	4,784.6	S
20263	Cottage cheese	249.3	MG
20264	Buttermilk and flavored milk	314.0	MG
20260	Fluid milk and related products, n.s.k.	443.6	HG
2031-	Canned and cured seafoods	471.0	D
2032-	Canned specialties	1,321.9	MG
2032[illegible]	Canned baby foods (except meat)	264.6	S
2032[illegible]	Soups and other canned specialties including code 20234 and 20320	785.6	MG
2032[illegible]	Canned dry beans	271.7	MG
2033-	Canned fruits and vegetables	3,416.5	D
2033[illegible]	Canned fruits, except baby food	903.1	S
2033[illegible]	Canned vegetables, except hominy and mushrooms	973.5	MG
2033[illegible]	Canned hominy and mushrooms	59.4	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
20334	Canned fruit juices	455.5	S
20335	Canned vegetable juices	108.2	S
20336	Catsup and other tomato sauces	584.1	HG
20338	Jams, jellies, and preserves	251.1	S
20330	Canned fruits and vegetables, n.s.k.	81.6	HG
2034-	Dehydrated food products	479.3	HG
20341	Dried fruits and vegetables, except soups	381.6	MG
20342	Soup mixes, dried	75.3	HG
20340	Dried fruits, vegetables and soup, n.s.k.	22.4	VHG
2035-	Pickles, sauces, and salad dressings	857.1	S
20352	Pickles and pickled products	296.2	MG
20353	Meat sauces, except tomato	121.1	S
20354	Mayonnaise, salad dressings, and sandwich spreads	390.3	MG
20350	Pickles, sauces, and salad dressings, n.s.k.	49.5	VHG
2036-	Fresh or frozen packaged fish	588.6	MG
20361	Frozen packaged fish and other seafood, including soup	466.5	MG
20362	Fresh packaged fish and other seafood	67.4	D
20360	Fresh or frozen packaged fish, n.s.k.	54.7	VHG
2037-	Frozen fruits and vegetables	2,176.7	VHG
20371	Frozen fruits, juices, and ades	454.4	S
20372	Frozen vegetables	607.0	MG
20373	Frozen specialties	1,031.4	MG
20370	Frozen fruits and vegetables, n.s.k.	83.9	VHG
2041-	Flour and grain mill products	2,252.1	D
20411	Wheat flour, except flour mixes	1,529.8	S
20412	Wheat mill products, except flour	187.2	S
20413	Corn mill products	239.3	VHG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
20415	Flour mixes and refrigerated doughs, made in flour mills	164.2	MG
20416	Other grain mill products	64.9	D
20410	Flour and grain mill products n.s.k.	66.7	VHG
2042-	Prepared animal feeds	4,509.2	D
20421	Poultry feeds, including supplements	1,474.3	S
20422	Livestock feed, including supplements	1,744.9	MG
20423	Dog and cat food	813.9	HG
20424	Other prepared animal feeds	257.7	D
20420	Prepared animal feeds, n.s.k.	218.4	VHG
2043-	Cereal preparations	752.0	S
2044-	Rice milling	563.5	MG
2045-	Blended and prepared flour and mixes	504.1	HG
2046-	Wet corn milling	684.1	S
2051-	Bread and related products	4,438.6	D
20511	Bread and bread-type rolls	2,872.4	MG
20512	Sweet yeast goods	392.9	S
20513	Soft cakes	504.2	S
20514	Pies	244.3	S
20515	Pastries	63.0	D
20517	Doughnuts (cake type)	184.5	MG
20510	Bread and related products, n.s.k.	177.3	MG
2052-	Cookies and crackers	1,415.2	D
20521	Crackers and pretzels	524.4	MG
20522	Cookies and ice cream cones	880.4	MG
20520	Crackers and cookies, n.s.k.	10.4	HG
2061-	Raw cane sugar	375.9	S
2062-	Cane sugar refining	1,411.8	D
2063-	Beet sugar	613.2	MG
2071-	Confectionery products	1,902.3	S

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
20711	Bar goods, except solid chocolate.	369.8	MG
20712	5- and 10-cent specialties.....	220.4	MG
20713	Package goods, except solid chocolate.....	593.4	S
20714	Bulk goods, except solid chocolate.	146.9	S
20715	Penny goods.....	60.6	D
20716	Salted nuts and other confectionery-type products.....	434.0	MG
20710	Confectionery products, n.s.k.....	77.2	VHG
2072-	Chocolate and cocoa products.....	589.2	D
20721	Chocolate coatings.....	146.7	S
20722	Confectionery-type chocolate and cocoa products, made from cocoa beans ground in same establishment.....	211.3	MG
20728	Other chocolate and cocoa product, made from cocoa beans and nibs ground in same establishment, including code 20720..	230.2	MG
2073-	Chewing gum.....	290.4	MG
2082-	Malt liquors.....	3,102.5	D
2083-	Malt.....	207.5	D
2084-	Wines and brandy.....	458.1	MG
2085-	Distilled liquor, except brandy.....	1,332.4	D
20851	Distilled liquors, except brandy....	186.6	MG
20853	Bottled liquors, except brandy.....	1,145.8	MG
2086-	Bottled and canned soft drinks.....	3,309.7	MG
2087-	Flavoring extracts, n.e.c.....	1,107.3	S
20871	Flavoring extracts, emulsions, and other liquid flavors.....	90.4	D
20872	Liquid beverage bases, not for use by soft drink bottlers.....	121.0	MG
20873	Flavoring sirups for use by soft drink bottlers.....	415.7	MG
20874	Other flavoring agents, except chocolate sirups.....	434.7	MG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
20870	Flavorings, n.s.k.	45.5	VHG
2091–	Cottonseed oil mills	320.0	D
20911	Cottonseed oil, crude	100.0	D
20912	Cottonseed oil, once-refined	52.8	D
20913	Cotton linters	30.7	D
20914	Cottonseed cake and byproducts	127.3	D
20910	Cottonseed oil mill products, n.s.k.	9.2	HG
2092–	Soybean oil mills	1,561.9	D
20921	Soybean oil	480.5	S
20922	Soybean cake and byproducts	1,077.8	MG
20920	Soybean oil mill products, n.s.k.	3.6	MG
2093–	Vegetable oil mills, n.e.c.	230.5	D
20931	Linseed oil	48.5	D
20932	Vegetable oils, except cottonseed, soybean, and linseed	137.6	MG
20933	Other vegetable oil mill products, except cottonseed and soybean	43.4	D
20930	Vegetable oil mill products, n.s.k.	1.0	D
2094–	Animal and marine fats and oils	670.3	D
20941	Grease and inedible tallow	297.4	D
20942	Meat meal and tankage	252.8	S
20943	Animal and marine oil mill products, including foots	93.6	D
20940	Animal and marine fats and oil, n.s.k.	26.5	MG
2095–	Roasted coffee	1,804.3	D
20951	Roasted coffee, whole or ground	1,382.0	S
20952	Concentrated coffee	422.3	S
2096–	Shortening and cooking oils	1,691.1	MG
20961	Shortening and cooking oils	1,233.5	MG
20962	Margarine	457.6	MG
2097–	Manufactured ice	70.7	D

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2098-	Macaroni and spaghetti	272.0	MG
2099-	Food preparations, n.e.c.	2,648.2	MG
20991	Desserts (ready-to-mix)	235.7	MG
20992	Chips (potato, corn, etc.)	703.9	MG
20993	Sweetening sirups and molasses	139.6	S
20994	Baking powder and yeast	88.3	S
20996	Vinegar and cider	60.7	S
20998	Chocolate and cocoa products, except confectionery (made from purchased chocolate)	52.3	S
20999	Other food preparations, n.e.c.	1,186.5	MG
20990	Food preparations, n.e.c., n.s.k.	181.2	HG
2111-	Cigarettes	3,076.0	S
2121-	Cigars	393.2	D
2131-	Chewing and smoking tobacco	198.5	D
2141-	Tobacco stemming and redrying	1,052.9	S
21411	Tobacco redrying	97.5	HG
21412	Tobacco stemming, including 21410	955.4	D
2211-	Weaving mills, cotton	2,843.3	D
	Gray goods:		
22111	Cotton duck and allied fabrics	165.4	HG
22112	Cotton sheeting and allied fabrics	622.1	S
22113	Cotton print cloth yarn fabrics	371.2	D
22114	Cotton colored yarn fabrics, toweling and dishcloth fabrics and napped cotton fabrics, including blanketing	161.2	D
22115	Fine cotton goods	294.0	D
22116	Other broadwoven cotton fabrics and specialties	231.8	MG
22117	Finished cotton broadwoven fabric made in weaving mills	356.8	D
	Fabricated cotton textile products:		
22118	Cotton sheets and pillowcases made in weaving mills	285.0	MG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
22119	Cotton towels and washcloths made in weaving mills	269.1	MG
22110	Other cotton broadwoven fabrics made in weaving mills, n.s.k.	86.7	S
2221-	Weaving mills, synthetics	2,927.5	MG
	Gray goods:		
22211	100 percent filament rayon and/or acetate fabric, including blends chiefly rayon and/or acetate	311.5	S
22212	100 percent filament fabrics, except rayon and/or acetate	343.7	HG
22213	100 percent rayon and/or acetate fabrics, including blends	281.6	HG
22214	100 percent spun polyester blends with cotton	682.8	HG
22215	All other 100 percent spun noncellulosic fabrics	242.6	D
22216	Combinations of filament and spun yarn fabrics chiefly manmade fiber	228.4	MG
22217	Specialty manmade fiber fabrics	224.5	D
22218	Finished manmade fiber and silk broadwoven fabrics (made in weaving mills)	510.8	HG
22219	Fabricated manmade fiber and silk textile products (made in weaving mills)	76.2	D
22210	Manmade fiber and silk broadwoven fabrics, n.s.k.	25.4	HG
2231-	Weaving, finishing mills, wool	882.0	D
22311	Finished wool yarn, not combined or spun at same establishment	68.6	D
22312	Wool fabrics, gray goods	145.6	MG
22313	Finished wool apparel fabrics	521.3	D
22314	Finished wool nonapparel fabrics and felts	67.9	S
22315	Receipts for commission finishing of wool fabrics	42.8	S
22319	Wool and chiefly wool blankets	7.4	D
22310	Woven wool fabrics, n.s.k.	28.4	VHG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2241-	Narrow fabric mills	450.9	D
22411	Woven narrow fabrics	324.3	MG
22414	Braided narrow fabrics	80.1	MG
22415	Covered rubber thread	39.4	HG
22410	Narrow fabrics, n.s.k.	7.1	HG
2251-	Women's hosiery, except socks except contract and commission receipts	937.0	D
22511	Women's finished full-fashioned stockings	40.3	S
22513	Women's finished seamless hose	681.8	MG
22514	Women's full-fashioned hose shipped in the greige	9.9	D
22515	Women's seamless hose shipped in the greige	181.0	HG
22510	Women's hose, except socks, n.e.c., n.s.k.	24.0	VHG
2252-	Hosiery, n.e.c.	490.7	D
22522	Men's finished seamless hose	254.3	S
22523	Other finished seamless hose	147.3	D
22524	Seamless hose (except women's) shipped in the greige	72.4	MG
22520	Hosiery, n.e.c., n.s.k.	16.7	VHG
2253-	Knit outerwear mills, except commission receipts	1,083.7	MG
22531	Sweaters, knit jackets, and jerseys (made from yarns or fabrics knit in same establishment)	530.2	S
22532	Knit sport shirts (made from yarn or fabric knit in same establishment)	254.3	MG
22533	All other knit outerwear products (made from yarn or fabric knit in same establishment)	227.5	S
22530	Knit outerwear, n.s.k.	71.7	HG
2254-	Knit underwear mills	431.1	S

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
22541	Men's and boys' knit underwear and nightwear (made from yarn or fabric knit in same establishment)	304.3	MG
22542	Women's and children's knit underwear (made from yarn or fabric knit in same establishment)	84.6	MG
22543	Women's and children's knit nightwear (made from yarn or fabric knit in same establishment)	38.3	D
22540	Knit underwear and nightwear, n.s.k.	3.9	VHG
2256-	Knit fabric mills (excluding commission receipts)	1,409.1	VHG
22561	Warp-knit fabrics	598.8	HG
22562	Circular knit fabrics	755.4	HG
22560	Knit fabrics, n.s.k.	54.9	VHG
2259-	Knitting mills, n.e.c.	40.2	D
2261-	Finishing plants, cotton	689.9	D
22617	Cotton broadwoven fabric finishing (not finished in weaving mills)	303.3	D
22619	Commission finishing of cotton broadwoven fabrics	386.6	S
22610	Finishing receipts, n.s.k.	—	D
2262-	Finishing plants, synthetics and silk	596.3	VHG
22628	Finished manmade fiber and silk broadwoven fabrics (not finished in weaving mills)	152.6	HG
22629	Commission finishing of manmade fiber and silk broadwoven fabrics	438.1	MG
22620	Finishing manmade fiber and silk broadwoven fabrics, n.s.k.	5.6	VHG
2269-	Finishing plants, n.e.c.	221.8	HG
2271-	Woven carpets and rugs	235.7	D

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2272-	Tufted carpets and rugs	1,617.4	VHG
2279-	Carpets and rugs, n.e.c.	104.4	D
2281-	Yarn mills, except wool	1,808.7	MG
22811	Carded cotton yarns	422.1	S
22812	Combed cotton yarns	340.9	D
22813	Rayon and or acetate spun yarns.	247.8	MG
22814	Spun noncellulosic fiber and silk yarns	770.2	HG
22810	Yarn, except wool, n.s.k.	27.7	VHG
2282-	Throwing and winding mills, including 22820	701.7	HG
22822	Rewound, plied, etc., yarns, except wool (not spun or thrown at same establishment)	81.2	S
22823	Thrown filament yarns, except textured	87.5	HG
22824	Textured, crimped, or bulked filament yarns	472.7	VHG
22829	Commission throwing, plying, etc. of yarns	47.8	HG
2283-	Wool yarn mills, including 22830	342.2	D
22831	Wool yarns, excluding carpet, including yarns spun and finished at same establishment	246.3	D
22832	Wool yarns, carpet	90.9	D
2284-	Thread mills	271.8	S
22841	Finished thread for home use	33.5	MG
22842	Finished thread for industrial use	186.1	MG
22843	Unfinished thread	49.8	HG
22840	Thread, n.s.k.	2.4	D
2291-	Felt goods, n.e.c.	132.8	S
2292-	Lace goods	64.5	D
2293-	Paddings and upholstery filling	198.0	S

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2294-	Processed textile waste	96.3	D
2295-	Coated fabrics, not rubberized	645.8	VHG
22951	Pyroxylin-coated fabrics	33.9	D
22952	Vinyl coated fabrics	392.8	MG
22953	Other coated fabrics	201.4	MG
22950	Coated fabrics, not rubberized, n.s.k.	17.7	D
2296-	Tire cord and fabric	506.7	D
2297-	Scouring and combing plants	93.4	D
2298-	Cordage and twine	174.2	S
22981	Hard fiber cordage and twine	38.2	MG
22982	Soft fiber cordage and twine, except cotton	88.5	HG
22983	Cotton cordage and twine	39.9	S
22980	Cordage and twine, n.s.k.	7.6	HG
2299-	Textile goods, n.e.c.	271.6	HG
22991	Nonwoven textiles	214.8	HG
22992	Jute goods (except jute felts, cordage, or twine) and linen goods	35.4	D
22990	Textile goods, n.e.c., n.s.k.	21.4	HG
2311-	Men's and boys' suits and coats, except contract and commission work	1,627.5	S
23111	Men's suits	890.6	S
23112	Men's overcoats and topcoats	132.4	MG
23113	Men's tailored dress and sport coats and jackets	430.0	HG
23114	Boys' suits, coats, and tailored jackets	122.9	MG
23110	Men's and boys' suits and coats, n.s.k.	51.6	VHG
2321-	Men's and boys' shirts and nightwear, except contract and commission work	1,194.8	S

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
23212	Men's and boys' knit sport shirts (made from purchased knit fabrics)	190.3	HG
23214	Men's and boys' woven dress and sport shirts	858.8	S
23215	Men's and boys' nightwear (of woven or purchased knit fabric)	89.7	S
23210	Men's and boys' (except work shirts) and nightwear, n.s.k.	56.0	VHG
2322-	Men's and boys' underwear (made of woven or purchased knit fabric)	177.0	S
2323-	Men's and boys' neckwear	125.9	D
2327-	Men's and boys' separate trousers, except contract and commission work	1,050.6	VHG
23271	Men's and boys' separate dress and sport trousers and dress shorts	1,035.0	MG
23270	Men's and boys' separate trousers, n.s.k.	15.6	HG
2328-	Men's and boys' work clothing except contract and commission work	875.9	MG
23281	Men's and boys' work shirts	120.4	MG
23282	Men's and boys' clothing, except shirts and service apparel	720.1	MG
23280	Men's and boys' work clothing, n.s.k.	35.4	VHG
2329-	Men's and boys' clothing, n.e.c., except contract and commission work	594.0	MG
23291	Men's and boys' coats and jackets, nontailored	333.4	MG
23292	Men's and boys' outerwear, n.e.c. (of woven or purchased knit fabrics)	221.6	HG
23290	Men's and boys' clothing, n.e.c., n.s.k.	39.0	VHG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2331–	Women's and misses' blouses, except contract and commission work	578.3	MG
23312	Women's, misses' knit sport shirts (of purchased knit fabric)	91.4	MG
23317	Women's, misses' woven fabric blouses and shirts	425.2	D
23310	Women's and misses' blouses, n.s.k.	61.7	HG
2335–	Women's and misses dresses, except contract and commission work	2,587.7	S
23351	Women's, misses' dresses sold at a unit price	1,795.4	MG
23352	Women's, misses' dresses sold at a dozen-price	430.7	MG
23350	Women's and misses' dresses, n.s.k.	361.6	HG
2337–	Women's and misses' suits and coats, except contract and commission work	1,420.6	S
23371	Women's, misses coats, except fur and leather	604.3	D
23372	Women's, misses' suits	211.3	D
23374	Women's, misses' skirts and jackets	429.4	S
23370	Women's, misses' suits, coats, n.s.k.	175.6	HG
2339–	Women's and misses' outerwear, except contract and commission work	818.4	HG
23392	Women's, misses' washable service apparel	121.4	MG
23393	Women's, misses' outerwear, n.e.c. (of woven or purchased knit fabric)	606.9	S
23390	Women's and misses' outerwear, n.e.c., n.s.k.	90.1	MG

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TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2341-	Women's and children's underwear, except contract and commission work	943.3	S
23412	Women's and children's underwear of woven or purchased knit fabrics	487.9	S
23413	Women's and children's nightwear of woven or puchased knit fabrics	380.2	S
23410	Women's and children's underwear, n.s.k.	75.2	VHG
2342-	Corsets and allied garments, except contract and commission work	597.0	D
23421	Brassieres	285.6	D
23422	Corsets, girdles, combinations, and accessories	281.8	S
23420	Corsets and allied garments, n.s.k.	29.6	VHG
2351-	Millinery	108.3	D
2352-	Hats and caps, except millinery, including 23520	196.6	D
23521	Hats and hat bodies, excluding cloth and millinery	72.8	D
23522	Cloth hats and caps	109.7	MG
2361-	Children's dresses and blouses, except contract work	441.5	D
23611	Children's dresses, blouses, shirts, except knit sport shirts	389.9	S
23612	Children's knit sport shirts	51.6	MG
2363-	Children's coats and suits, except contract and commission work	184.4	D
2369-	Children's outerwear, n.e.c.	440.1	S
2371-	Fur goods	306.8	D
2381-	Fabric dress and work gloves	163.4	D

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
23811	Dress gloves, mittens of woven or purchased knit fabrics	23.3	D
23812	Work gloves, mittens of woven or purchased knit fabrics	134.2	MG
23810	Fabric dress and work gloves, n.s.k.	5.9	HG
2384-	Robes and dressing gowns	148.4	S
2385-	Waterproof outer garments	318.8	HG
2386-	Leather and sheep lined clothing	130.2	S
2387-	Apparel belts	98.7	D
23871	Leather belts	60.0	MG
23872	Belts, other than leather	22.9	D
23870	Apparel belts, n.s.k.	15.8	HG
2389-	Apparel and accessories, n.e.c.	136.5	MG
2391-	Curtains and draperies	434.5	VHG
2392-	Housefurnishings, n.e.c.	1,055.1	MG
23926	Bedspreads and bedsets (not made in weaving mills)	177.1	HG
23928	Cotton sheets and pillowcases (not made in weaving mills)	188.5	MG
23929	Cotton towels and washcloths (not made in weaving mills)	34.9	S
23920	Other housefurnishings	654.6	MG
2393-	Textile bags	280.1	D
2394-	Canvas products	221.7	HG
2395-	Pleating and stitching	124.9	D
23951	Embroideries, except Schiffli machine and art needlework	48.0	S
23959	Commission embroidering, except Schiffli machine, etc., for the trade	41.2	D
23950	Pleating and stitching needlework and commission receipts, n.s.k.	35.7	HG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2396-	Automotive and apparel trimming..	967.2	HG
23961	Men's and boys' suit and coat findings, and hat and cap materials..	53.4	S
23962	Auto and furniture trimmings.....	669.3	MG
23963	Other trimmings and findings.....	210.2	HG
23960	Auto and apparel trimmings, n.s.k..	34.3	MG
2397-	Schiffli machine embroideries.....	81.5	D
2399-	Fabricated textile products, n.e.c....	559.5	HG
2411-	Logging camps and contractors.....	1,677.3	D
24119	Receipts for contract logging.....	371.8	S
24110	Logs, bolts, and pulpwood.....	1,305.5	MG
2421-	Sawmills and planing mills, except wood chips.....	3,634.8	D
24211	Rough lumber and sawed ties.....	846.3	D
24212	Dressed lumber.....	2,143.0	MG
24217	Softwood cut stock.....	99.1	S
24218	Softwood flooring and general sawmill and planing mill products..	55.2	D
24219	Contract or custom sawing of logs owned by others.....	40.3	D
24210	Sawmill and planing mill products, n.s.k.....	450.9	VHG
2426-	Hardwood dimension and flooring...	409.6	S
24261	Hardwood flooring.....	122.4	D
24262	Hardwood dimension stock, furniture parts, and vehicle stock..	260.2	MG
24260	Hardwood dimension and flooring, n.s.k.....	27.0	HG
2429-	Special product sawmills, n.e.c., including wood chips.....	352.8	S
2431-	Millwork.....	1,542.7	S
24311	Window units, wood.....	173.1	MG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
24312	Wood window sash, including combination screen and storm, except window screens and units.	45.4	S
24313	Wood window and door frames.	68.0	D
24314	Wood doors, interior and exterior.	346.7	MG
24315	Other wood doors.	134.9	D
24316	Finished wood mouldings.	231.9	MG
24317	Cabinet work, to be built in.	207.8	MG
24318	Other millwork products.	133.5	MG
24310	Millwork, n.s.k.	201.4	HG
2432-	Veneer and plywood.	1,963.4	MG
24321	Hardwood plywood.	363.8	S
24322	Softwood plywood, interior.	502.6	S
24323	Softwood plywood, exterior.	572.7	HG
24324	Prefinished hardwood plywood from purchased plywood and other plywood-type products, except particleboard.	171.0	MG
24325	Hardwood veneer.	129.2	D
24326	Softwood veneer.	199.6	MG
24320	Veneer and plywood, n.s.k.	24.5	HG
2433-	Prefabricated wood structures.	516.8	MG
2441-	Nailed wooden boxes and shook.	266.1	D
24411	Nailed or lock-corner wooden boxes.	106.4	MG
24412	Box shook for fruits, vegetables, industrial uses.	125.6	MG
24410	Nailed wooden boxes and shook, n.s.k.	34.1	VHG
2442-	Wirebound boxes and crates.	125.1	D
2443-	Veneer and plywood containers.	26.6	D
2445-	Cooperage.	72.3	D
2491-	Wood preserving.	356.3	MG
24911	Wood owned and treated by same establishment.	305.4	MG
24919	Contract wood preserving.	32.6	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
24910	Wood preserving, n.s.k.	18.3	VHG
2499-	Wood products, n.e.c.	1,330.3	MG
24991	Mirror and picture frames	144.6	MG
24992	Pallets and skids	215.3	HG
24993	Particleboard	133.0	HG
24994	Cork products	17.9	D
24995	Wood products, n.e.c.	512.5	MG
24996	Fabricated hardboard products (from hardboard produced at same establishment)	182.8	MG
24990	Wood products, n.e.c., n.s.k.	124.2	VHG
2511-	Wood household furniture	2,524.4	MG
25111	Radio, phonograph, and TV wood cabinets	266.5	HG
25112	Other wood living room, library, sunroom and hall furniture	431.4	MG
25113	Wood dining room and kitchen furniture, except cabinets	427.1	MG
25114	Kitchen cabinets, wood	327.5	S
25115	Wood bedroom furniture	796.5	MG
25116	Children's wood furniture	54.1	S
25117	Wood outdoor furniture and unpainted wood furniture	70.3	MG
25110	Wood household furniture, n.s.k.	151.0	VHG
2512-	Upholstered household furniture	1,406.0	MG
25121	Upholstered wood household furniture	1,245.2	MG
25126	Wood frames for household furniture	68.2	D
25120	Upholstered household furniture, n.s.k.	92.6	VHG
2514-	Metal household furniture	652.1	D
25141	Metal household furniture	190.1	MG
25142	Metal kitchen furniture	62.6	D
25143	Metal outdoor furniture	119.1	S
25144	Other metal household furniture	238.2	HG
25140	Metal household furniture, n.s.k.	42.1	VHG
2515-	Mattresses and bedsprings	791.3	S

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
25151	Innerspring mattresses, other than crib size	272.0	S
25152	Other mattresses, including crib mattresses	66.3	MG
25153	Bedsprings	205.0	MG
25154	Convertible sofas	124.9	MG
25155	Jackknife sofa and chair beds	41.9	S
25156	Studio couches	16.1	S
25150	Mattresses and bedsprings, n.s.k.	65.1	VHG
2519-	Household furniture, n.e.c.	83.9	VHG
2521-	Wood office furniture	167.0	HG
2522-	Metal office furniture	582.8	HG
25221	Metal office furniture	141.9	HG
25222	Desks	145.1	HG
25223	Cabinets and cases	215.9	MG
25224	Other metal office furniture	74.0	MG
25220	Metal office furniture, n.s.k.	5.9	VHG
2531-	Public building furniture	404.3	MG
25311	School furniture, except stone and concrete	168.3	MG
25312	Public building furniture, except school furniture	227.1	MG
25310	Public building furniture, n.s.k.	8.9	MG
2541-	Wood partitions and fixtures	500.2	MG
2542-	Metal partitions and fixtures	531.9	HG
2591-	Venetian blinds and shades	232.2	D
25911	Window shades and accessories	171.8	MG
25912	Venetian blinds	27.4	D
25910	Venetian blinds and shades, n.s.k.	33.0	VHG
2599-	Furniture and fixtures, n.e.c.	199.3	MG
2611-	Pulpmills, including n.s.k., 26110	965.9	S
26111	Special alpha and dissolving wood-pulp	270.4	S

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
26112	Other pulp, including wood, and pulpmill byproducts, except tall oil	690.6	MG
2621-	Papermills, except building	5,001.0	S
26211	Newsprint	369.3	MG
26212	Groundwood paper, uncoated	209.3	MG
26213	Coated printing converting paper	875.9	HG
26214	Book paper, uncoated	625.2	MG
26215	Papermill products, n.e.c., including 26215-26219	2,216.7	MG
26210	Tissue paper and other machine creped paper	704.6	MG
2631-	Paperboard mills	2,906.0	MG
26318	Wet machine board	41.8	S
26310	Paperboard mill products, n.s.k. including 26312-26317	2,964.2	MG
2641-	Paper coating and glazing	1,474.3	MG
26411	Printing paper coated outside papermills	155.8	D
26412	Oiled, waxed and wax laminated paper	172.2	D
26413	Gummed products	138.1	MG
26414	Pressure-sensitive tape	480.3	MG
26415	Laminated or coated wrappers, except waxed rolls or sheets	180.1	MG
26416	Other coated and processed paper, except wrappers	327.0	S
26410	Coated and glazed paper, n.s.k.	20.8	VHG
2642-	Envelopes, except stationery	462.6	MG
2643-	Bags, except textile bags	1,362.5	MG
26431	Grocers' and variety bags (paper) and wardrobe, shopping, other	371.4	MG
26432	Specialty bags and liners	604.2	MG
26433	Shipping sacks, multiwall bags	330.7	MG
26430	Bags, except textile bags, n.s.k.	56.2	VHG
2644-	Wallpaper	46.0	D

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2645-	Die-cut paper and board	587.9	HG
26451	Office supplies and miscellaneous products	385.2	MG
26452	Pasted, lined, laminated, or surface-coated paperboard	185.8	HG
26450	Die-cut paper and board, n.s.k.	16.9	HG
2646-	Pressed and molded pulp goods	159.2	VHG
26461	Bituminous fiber pipe, conduit and fittings	25.8	S
26462	Other pressed and molded pulp goods, including n.s.k. 26460	133.4	MG
2647-	Sanitary paper products, including n.s.k., 26470	1,413.6	MG
26471	Sanitary napkins and tampons	208.5	MG
26472	Sanitary tissue health products	1,199.8	MG
2649-	Converted paper products, n.e.c.	766.6	MG
26491	Stationery, tablets, etc.	290.8	MG
26492	Wrapping products	126.5	MG
26495	Other converted paper products	343.0	S
26490	Converted paper products, n.s.k.	6.3	D
2651-	Folding paperboard boxes	1,200.2	MG
2652-	Setup paperboard boxes	305.8	D
2653-	Corrugated and solid fiber boxes	3,136.3	MG
2654-	Sanitary food containers, including n.s.k., 26540	1,139.6	MG
26541	Milk and other beverage cartons	296.4	S
26542	Cups and liquid-tight food containers	413.7	MG
26543	Other sanitary food containers	421.6	HG
2655-	Fiber cans, drums, etc.	472.7	HG
26551	Paperboard fiber drums	105.8	HG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
26552	Fiber cans, tubes, etc.	360.4	MG
26550	Fiber cans, drums, etc., n.s.k.	6.5	HG
2661-	Building paper and board mills	345.2	D
26611	Insulating board	197.3	S
26612	Construction paper	147.9	S
26610	Building paper and board, n.s.k.	N.A.	HG
2711-	Newspapers	5,961.5	MG
	Daily and Sunday newspapers:		
27111	Subscription and sales	1,414.0	MG
27112	Advertising	3,895.7	MG
	Weekly and other newspapers:		
27113	Subscription and sales	88.1	D
27114	Advertising	277.7	D
27110	Newspapers, n.s.k.	286.0	VHG
2721-	Periodicals	2,784.0	MG
	Farm periodicals:		
27211	Subscription and sales	14.7	MG
27212	Advertising	55.0	D
	Specialized business and professional periodicals:		
27213	Subscription and sales	181.8	MG
27214	Advertising	544.5	MG
	General periodicals:		
27215	Subscription and sales	648.8	MG
27216	Advertising	884.4	MG
27217	Other periodicals, except shopping news, n.e.c. (subscriptions, sales, and advertising)	94.7	MG
27210	Periodicals, n.s.k.	160.1	VHG
2731-	Book publishing	2,333.2	HG
27311	Textbooks, including teachers'	749.3	MG
27312	Subscription reference books	227.7	MG
27313	Technical, scientific, and professional books	259.6	MG
27314	Religious books	103.4	MG
27315	General books (trade, etc.)	700.1	MG
27316	Other books and pamphlets	218.6	MG
27310	Book publishing, n.s.k.	74.5	VHG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2732-	Book printing	951.8	HG
27321	Book printing and binding (lithographic)	652.6	HG
27322	Book printing and binding, except lithographic	262.1	S
27320	Book printing, n.s.k.	37.1	HG
2741-	Miscellaneous publishing	673.4	HG
27411	Catalog and directory publishing	192.7	MG
27412	Business services publications	140.8	MG
27413	Other miscellaneous publishing	264.5	MG
27410	Miscellaneous publishing, n.s.k.	75.4	VHG
2751-	Printing, except lithographic	3,407.6	D
	Letterpress printing:		
27511	Magazines and periodicals	519.4	D
27512	Labels and wrappers	394.9	MG
27513	Catalogs and directories	187.6	MG
27514	Financial and legal	187.4	HG
27515	Advertising	367.6	MG
27516	Other general	624.8	D
27517	Publication printing (gravure)	219.8	MG
27518	Other gravure printing	258.3	HG
27519	Screen printing, except textiles	99.6	MG
27510	Commercial printing, except lithographic, n.s.k.	548.2	HG
2752-	Printing, lithographic	3,380.8	VHG
27521	Magazines and periodicals	324.2	HG
27522	Labels and wrappers	196.7	MG
27523	Catalogs and directories	279.5	HG
27524	Financial and legal	150.4	MG
27525	Advertising	1,071.2	MG
27526	Other general (job)	822.8	MG
27527	Lithographic plates made for others	191.5	S
27520	Commercial printing, lithographic, n.s.k.	344.5	VHG
2753-	Engraving and plate printing	192.7	MG
2761-	Manifold business forms	979.9	HG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes con.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
27611	Continuous business forms	542.0	HG
27612	Unit set forms	365.6	MG
27613	Sales and other manifold books	47.3	D
27610	Manifold business forms, n.s.k.	25.0	VHG
2771-	Greeting card publishing	489.3	MG
27711	Greeting cards, publishers' sales	422.2	MG
27712	Greeting cards, printed for publication by others	51.0	MG
27710	Greeting cards, n.s.k.	16.1	HG
2782-	Blankbooks and looseleaf binders	381.8	MG
27821	Blankbook making	194.0	MG
27822	Looseleaf binders and devices	167.4	MG
27820	Blankbooks and looseleaf binders, n.s.k.	20.4	HG
2789-	Bookbinding and related work	329.9	HG
27891	Edition, library, and other hard cover bookbinding	157.2	MG
27892	Other book and pamphlet binding	136.9	S
27890	Bookbinding and related work, n.s.k.	35.8	HG
2791-	Typesetting	372.6	HG
2793-	Photoengraving	249.6	D
2794-	Electrotyping and stereotyping	63.9	D
2812-	Alkalies and chlorine, including n.s.k., 28120	607.9	D
28121	Chlorine, compressed or liquid	195.5	MG
28122	Sodium carbonate (soda ash)	135.9	S
28123	Sodium hydroxide (caustic soda)	247.9	S
28124	Other alkalies	27.1	MG
2813-	Industrial gases, including n.s.k., 28130	628.0	D

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
28132	Acetylene	79.9	D
28133	Carbon dioxide	51.6	D
28134	Elemental gases and compressed and liquified gases, n.e.c.	474.4	MG
2815–	Cyclic intermediates and crudes	1,801.8	S
28151	Cyclic intermediates	1,147.5	MG
28152	Synthetic organic dyes	365.0	MG
28153	Synthetic organic pigments, lakes, toners	189.2	MG
28155	Cyclic (coal tar) crudes (formerly 2814)	88.8	S
28150	Cyclic intermediates and crudes, n.s.k.	11.3	VHG
2816–	Inorganic pigments	628.3	S
28161	Titanium pigments	317.4	S
28162	Other white opaque pigments	77.5	MG
28163	Chrome colors and other inorganic pigments	225.2	S
28160	Inorganic pigments, n.s.k.	8.2	VHG
2818–	Industrial organic chemicals, n.e.c.	6,081.4	MG
28181	Miscellaneous cyclic chemical products	401.2	HG
28182	Miscellaneous acrylic chemicals and chemical products	4,431.9	MG
28183	Synthetic organic chemicals, n.e.c.	660.7	MG
28184	Pesticides and other organic chemicals	322.9	MG
28185	Ethyl alcohol and other industrial organic chemicals, n.e.c.	261.4	MG
28180	Industrial organic chemicals, n.s.k.	3.3	HG
2819–	Industrial inorganic chemicals, n.e.c.	3,854.2	D
28191	Synthetic ammonia, nitric acid, and ammonium compounds	778.5	MG
28192	Inorganic industrial and household bleaching compounds	232.1	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
28193	Sulfuric acid	294.1	MG
28194	Inorganic acids, except nitric and sulfuric	234.5	MG
28195	Aluminum oxide	397.2	MG
28196	Other aluminum compounds	138.1	MG
28197	Potassium and sodium, except bleaches, alkalies, and alums	497.9	D
28198	Chemical catalytic preparations	124.3	MG
28199	Other inorganic chemicals, n.e.c.	1,124.8	MG
28190	Industrial inorganic chemicals, n.e.c., n.s.k.	32.7	HG
2821-	Plastic materials and resins	4,146.8	HG
28211	Unsupported plastics film, etc. from resins manufactured in same establishment	242.1	S
28212	Regenerated cellulosic products, except rayon	337.6	S
28213	Thermoplastic resins, except resins for protective coats	2,178.4	MG
28214	Thermosetting resins, except resins for protective coats	620.2	MG
28215	Synthetic resin adhesives, from resins manufactured in same establishment	61.5	HG
28216	Synthetic resins for protective coatings	330.6	S
28217	Custom compounded purchased resins	261.3	S
28219	Plastics and resin material, n.e.c.	103.8	MG
28210	Plastics material and resins, n.s.k.	11.3	HG
2822-	Synthetic rubber	1,060.2	MG
2823-	Cellulosic manmade fibers	751.6	D
28231	Acetate yarn	339.8	S
28232	Rayon yarn, viscose and cuprammonium processes	411.8	D
2824-	Organic fibers, noncellulosic	2,393.6	VHG
28241	Polyamide fibers, nylon, except monofilaments	1,284.7	MG
28242	Other noncellulosic synthetic organic fibers	1,108.9	HG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
2831–	Biological products	247.6	HG
28311	Biological products for human use, including 28312, 3, 4	196.6	MG
28315	Biological products for veterinary use (formerly 28312)	46.6	MG
28310	Biological products, n.s.k.	4.4	VHG
2833–	Medicinals and botanicals	722.1	D
28331	Synthetic organic medicinal chemicals, in bulk	529.5	MG
28332	Other medicinal chemicals in bulk, n.e.c.	86.1	MG
28330	Medicinals and botanicals, n.s.k.	6.5	VHG
2834–	Pharmaceutical preparations	4,608.0	MG
28341	Pharmaceutical preparations affecting neoplasms, endocrine system and metabolic diseases, for human use	458.4	HG
28342	Pharmaceutical preparations acting on the central nervous system and the sense organs, for human use	1,256.3	MG
28343	Pharmaceutical preparations acting on the cardiovascular system, for human use	239.4	MG
28344	Pharmaceutical preparations acting on the respiratory system, for human use	431.6	MG
28345	Pharmaceutical preparations acting on the digestive or the genito-urinary systems, for human use	608.0	MG
28346	Pharmaceutical preparations acting on the skin, for human use	259.7	MG
28347	Vitamin, nutriment and hematinic preparations for human use	409.4	MG
28348	Pharmaceutical preparations affecting parasitic and infective diseases, for human use	736.2	MG
28349	Pharmaceutical preparations for veterinary use	152.7	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
28340	Pharmaceutical preparations, n.e.c.	56.3	VHG
2841-	Soap and other detergents	2,306.1	D
28411	Alkaline detergents and acid-type cleaners	358.2	MG
28412	Soaps, except specialty cleaners (nonhousehold)	59.2	D
28413	Soaps, except specialty cleaners (household)	352.4	S
28414	Glycerin, natural	50.3	S
28415	Synthetic organic detergents, household	1,277.2	MG
28416	Synthetic organic detergents, non-household	152.1	MG
28410	Soap and other detergents, n.s.k.	56.7	VHG
2842-	Polishes and sanitation goods	1,156.6	MG
28421	Household insecticides	138.7	MG
28423	Specialty cleaning products	589.6	MG
28424	Polishing preparations and related products	345.2	MG
28420	Polishes and sanitation goods, n.s.k.	83.1	VHG
2843-	Surface active agents	444.6	VHG
2844-	Toilet preparations	3,099.3	HG
28441	Shaving preparations	192.6	MG
28442	Perfumes, toilet water, colognes	471.1	HG
28443	Hair preparations, including shampoos	839.2	MG
28444	Dentifrices, including mouthwash	349.2	MG
28445	Other cosmetics	1,188.7	MG
28440	Toilet preparations, n.s.k.	58.5	VHG
2851-	Paints and allied products	2,859.3	MG
28511	Exterior oil-type trade sales paint products	344.7	D
28512	Exterior water-type trade sales paint products	156.3	HG
28513	Interior oil-type trade sales paint products	284.8	D

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
28514	Interior water-type trade sales paint products including tinting bases	332.1	MG
28515	Trade sales lacquers	46.9	S
28516	Industrial product finishes, except lacquers	802.3	S
28517	Industrial lacquers, including acrylic	210.5	S
28518	Putty and allied products	178.9	MG
28519	Miscellanous paint products	270.1	MG
28510	Paints and allied products, n.s.k.	232.7	VHG
2861-	Gum and wood chemicals	225.8	D
28611	Softwood distillation products	90.8	S
28612	Other gum and wood chemicals	126.4	S
28610	Gum and wood chemicals, n.s.k.	8.6	VHG
2871-	Fertilizers, including n.s.k., 29710	961.3	MG
28711	Phosphatic fertilizer materials	523.5	MG
28712	Mixed fertilizers (from phosphatic fertilizer material products in same establishment and fertilizer material of organic origin)	430.1	S
2872-	Fertilizers, mixing only	614.8	MG
2879-	Agricultural chemicals, n.e.c.	937.5	HG
2891-	Adhesives and gelatin	528.7	MG
28911	Glues, adhesives, and sizes	448.4	MG
28912	Gelatin, except ready-to-eat desserts	70.7	MG
28910	Adhesives and gelatin, n.s.k.	9.6	VHG
2892-	Explosives	261.0	S
2893-	Printing ink	396.7	MG
2895-	Carbon black	198.5	D
2899-	Chemical preparations, n.e.c.	1,523.9	MG
28991	Salt	122.0	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
28992	Fatty acids	120.9	S
28993	Essential oils, fireworks, and pyrotechnics, and chemicals and chemicals preparations n.e.c.	1,186.8	MG
28990	Chemical preparations, n.e.c., n.s.k.	94.2	VHG
2911-	Petroleum refining	20,145.6	D
29111	Gasoline	10,331.2	MG
29112	Jet fuel	1,240.6	HG
29113	Kerosene	432.3	D
29114	Distillate fuel oil	3,453.5	MG
29115	Residual fuel oil	584.8	S
29116	Liquefied refinery gases	1,218.1	S
29117	Lubricating oils and greases made in refineries	884.3	S
29118	Unfinished oils and lubricating oil base stock	591.9	S
29119	Asphalt	459.1	MG
29110	Other finished petroleum products	949.8	HG
2951-	Paving mixtures and blocks	568.1	HG
2952-	Asphalt felts and coatings	543.7	D
29521	Asphalt and tar saturated felts and boards, nonbuilding use	34.2	MG
29522	Roofing asphalt, coatings, etc.	121.9	S
29523	Asphalt and tar roofing and siding products	385.8	S
29520	Asphalt felts and coatings, n.s.k.	1.8	VHG
2992-	Lubricating oils and greases	461.8	D
2999-	Petroleum and coal products, n.e.c.	81.2	D
3011-	Tires and inner tubes, including n.s.k., 30110	3,579.4	S
30111	Passenger car and motorcycle pneumatic tires (casings)	2,025.1	MG
30112	Truck and bus (and off-the-road) pneumatic tires	937.7	MG
30113	Other pneumatic and solid tires	290.5	MG
30114	All inner tubes	116.2	MG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
30115	Tread rubber, repair materials....	205.6	S
3021-	Rubber footwear.....	384.6	HG
3031-	Reclaimed rubber.....	49.3	D
3069-	Fabricated rubber products, n.e.c....	3,130.5	MG
30691	Rubber belts and belting.....	279.9	MG
30692	Rubber hose and tubing.....	427.7	MG
30693	Sponge and foam rubber goods...	319.5	MG
30694	Rubber floor and wall covering....	74.2	D
30695	Mechanical rubber goods, n.e.c....	1,183.5	MG
30696	Rubber heels and soles.....	134.6	S
30697	Druggist and medical sundries.....	96.2	S
30698	Other rubber goods, n.e.c.....	559.1	MG
30690	Fabricated rubber products, n.e.c. n.s.k.....	55.8	HG
3079-	Miscellaneous plastics products.....	6,455.9	VHG
30791	Unsupported plastics film, etc. from purchased resins.....	1,170.8	HG
30792	Foamed plastics products.....	567.9	HG
30793	Laminated sheets, rods, tubes.....	418.5	MG
30794	Plastic packaging containers.....	866.5	HG
30795	Industrial plastics products.....	1,510.7	MG
30796	Construction plastics products.....	522.5	HG
30797	Plastics dinnerware.....	224.7	MG
30798	Consumer and commercial plastics products, n.e.c.....	834.0	MG
30790	Miscellaneous plastics products, n.e.c., n.s.k.....	340.3	VHG
3111-	Leather tanning and finishing, except contract and commission work.....	734.2	D
31111	Finished cattle hide and kip side leathers.....	494.6	MG
31112	Finished calf and whole kip leathers.....	36.1	D
31113	Finished sheep and lamb leathers.	76.8	D
31114	Other finished leathers, n.e.c.....	68.5	D

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
31115	Rough, russet, and crust leather (not finished in same establishment)	30.4	MG
31110	Tanned and finished leather, n.s.k.	27.8	HG
3121-	Industrial leather belting	43.0	D
3131-	Footwear cut stock	262.4	D
3141-	Shoes, except rubber	2,918.8	D
31411	Men's dress and play shoes	725.0	MG
31412	Men's work shoes	297.8	HG
31413	Youths' and boys' shoes	97.1	MG
31414	Women's shoes	1,413.1	MG
31415	Misses' and children's shoes	223.6	S
31416	Infants' and babies' shoes	73.3	S
31417	All other footwear, except rubber and slippers	52.8	D
31410	Shoes, except rubber, n.s.k.	36.1	HG
3142-	House slippers	165.8	MG
3151-	Leather gloves and mittens	70.8	S
3161-	Luggage	322.3	MG
3171-	Women's handbags and purses	335.8	S
3172-	Personal leather goods	192.5	D
3199-	Leather goods, n.e.c.	94.3	MG
3211-	Flat glass, including n.s.k., 32110	969.8	S
32111	Sheet (window) glass	142.4	S
32112	Plate and float glass, including code 32114	405.1	S
32113	Laminated glass, including safety glass, made from glass produced in same establishment or 32313, purchased glass	422.3	MG
3221-	Glass containers	1,385.7	MG

2891

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3229-	Pressed and blown glass, n.e.c.	982.0	MG
32291	Kitchen, art, novelty glass	297.8	MG
32292	Lighting and electronic glass	351.1	MG
32293	Glass fiber (textile type)	172.8	MG
32294	Other pressed and blown glass	151.2	MG
32290	Pressed and blown glass, n.e.c., n.s.k.	9.1	VHG
3231-	Products from purchased glass	597.1	S
32315	Mirrors	170.0	MG
32316	Other products from purchased glass	375.5	MG
32310	Products from purchased glass, n.s.k.	51.6	VHG
3241-	Cement, hydraulic	1,302.3	D
3251-	Brick and structural clay tile	376.7	D
32511	Brick, except ceramic glazed and refractory	327.7	S
32512	Glazed brick and structural hollow tile	27.0	S
32510	Brick and structural clay tile, n.s.k.	22.0	VHG
3253-	Ceramic wall and floor tile	145.7	D
3255-	Clay refractories	249.6	D
3259-	Structural clay products, n.e.c.	153.7	D
32591	Vitrified clay sewer pipe	106.0	D
32592	Structural clay products, n.e.c.	47.7	MG
3261-	Vitreous plumbing fixtures	180.1	D
3252-	Vitreous china food utensils	71.2	D
3263-	Fine earthenware food utensils	59.2	D
3264-	Porcelain electrical supplies	197.5	HG
3269-	Pottery products, n.e.c.	100.0	D
3271-	Concrete block and brick	547.8	D

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3272–	Concrete products, n.e.c.	1,261.8	MG
32721	Concrete pipe	443.9	S
32722	Precast concrete products	423.3	S
32723	Prestressed concrete products	262.4	HG
32720	Concrete products, n.s.k.	132.2	HG
3273–	Ready-mix concrete	2,335.8	MG
3274–	Lime	158.0	D
3275–	Gypsum products	411.0	D
3281–	Cut stone and stone products	226.8	D
32811	Cut granite and granite products	88.8	D
32812	Cut limestone and limestone products	33.8	S
32813	Cut marble and other cut stone products	58.6	D
32810	Cut stone and stone products, n.s.k.	45.6	VHG
3291–	Abrasive products	813.6	MG
32911	Nonmetallic artificial sized grains abrasives (graded)	106.2	MG
32912	Nonmetallic bonded abrasives	306.1	S
32913	Nonmetallic coated abrasives and polishing wheels	299.1	MG
32914	Metal abrasives	78.8	S
32910	Abrasive products, n.s.k.	23.4	D
3292–	Asbestos products	594.0	D
32922	Asbestos friction materials	164.1	MG
32924	Asbestos-cement shingles	25.7	D
32925	Asphalt floor tile	21.0	D
32926	Vinyl asbestos floor tile	154.3	S
32927	Asbestos textiles and other asbestos products	225.7	MG
32920	Asbestos products, n.s.k.	3.2	VHG
3293–	Gaskets and insulations	369.6	MG
32932	Gaskets, all types	274.7	MG

2893

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
32933	Packing, except leather, rubber, and metal and asbestos insulation	76.6	MG
32930	Gaskets and insulations, n.s.k.	18.3	HG
3295-	Minerals, ground or treated	308.5	S
3296-	Mineral wool	455.1	MG
32961	Mineral wool for structural insulation	155.0	MG
32962	Mineral wool for industrial and equipment insulation	291.8	S
32960	Mineral wool, n.s.k.	8.3	HG
3297-	Nonclay refractories	312.0	MG
3299-	Nonmetallic minerals, n.e.c.	103.5	MG
3312-	Blast furnaces and steel mills	19,495.4	S
33121	Coke ovens and blast furnaces	1,320.9	S
33122	Steel ingots and semifinished shapes	2,676.9	S
33123	Hot rolled sheet and strip	4,724.9	S
33124	Hot rolled bars and shapes	4,762.8	S
33125	Steel wire produced in steel mills	357.2	D
33126	Steel pipe and tubes produced in steel mills	1,694.1	MG
33127	Cold rolled steel sheet and strip produced in steel mills	3,139.9	S
33128	Cold finished steel bars and bar shapes produced in steel mills	226.7	S
33129	Press and hammer steel forgings produced in steel mills	201.7	HG
33120	Other steel mill products, except wire products, n.s.k.	390.3	MG
3313-	Electrometallurgical products	416.3	D
33131	Ferromanganese, including 33134	206.7	D
33132	Ferrochrome	92.3	S
33133	Ferrosilicon	115.4	MG
33130	Electrometallurgical products, n.s.k.	1.9	D
3315-	Steel wire and related products	1,155.2	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
33151	Noninsulated ferrous wire rope, etc., made in wiredrawing plants.	187.3	MG
33152	Steel nails and spikes	183.5	S
33155	Steel wire not produced in steel mills	333.6	MG
33156	Fencing made in wiredrawing plants	88.6	MG
33157	Woven wire products made in wiredrawing plants	41.4	HG
33159	Other fabricated ferrous wire products, except springs, made in wiredrawing plants	308.6	HG
33150	Steel wire and related products, n.s.k.	12.2	HG
3316-	Cold finishing of steel shapes	1,036.1	VHG
33167	Cold rolled steel sheet and strip not made in steel mills	619.2	MG
33168	Cold rolled steel shapes not made in steel mills	399.3	MG
33160	Cold rolled sheet, strip, and bar, n.s.k.	17.6	VHG
3317-	Steel pipe and tubes not made in steel mills	1,149.5	S
3321-	Gray iron foundries	2,978.1	MG
33211	Molds for heavy steel ingots	253.0	S
33212	Cast iron pressure pipe	327.6	S
33213	Cast iron soil pipe	175.2	S
33214	All other gray iron castings	2,147.2	MG
33210	Gray iron castings, n.s.k.	75.1	HG
3322-	Malleable iron foundries	444.8	MG
3323-	Steel foundries	1,147.3	HG
3331-	Primary copper	1,409.8	D
33311	Copper smelter products	779.6	D
33312	Refined primary copper, including n.s.k., 33310	630.2	S

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3332-	Primary lead	(D)	D
33323	Refined primary lead	143.7	MG
3333-	Primary zinc	285.3	D
33331	Zinc smelter products	28.0	D
33334	Refined primary zinc	257.3	D
3334-	Primary aluminum	1,621.9	MG
33347	Aluminum ingot produced in primary aluminum reduction plants.	1,377.6	MG
33348	Aluminum extrusion billet, produced in primary aluminum reduction plants	244.3	HG
3339-	Primary nonferrous metals, n.e.c., including 33415, 33416	782.4	VHG
33395	Precious metals, primary smelting, including 33415	413.8	MG
33397	Other primary nonferrous metals, including magnesium, smelted or refined, including 33416	358.6	HG
33390	Primary nonferrous metals, n.e.c., n.s.k.	10.0	VHG
3341-	Secondary nonferrous metals, except 33415, 33416	1,150.4	S
33412	Secondary copper	413.2	MG
33413	Secondary lead	228.1	D
33414	Secondary zinc	32.3	D
33417	Aluminum ingot from secondary smelters	356.8	S
33418	Aluminum extrusion billet from secondary smelters	49.5	HG
33410	Secondary nonferrous metals, n.s.k.	70.5	VHG
3351-	Copper rolling and drawing	2,423.4	D
33511	Copper and copper-base alloy wire other than for electrical transmission	110.0	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
33512	Rolled, drawn, extruded copper and copper-base alloy mill products, including n.s.k., 33510....	2,313.4	MG
3352-	Aluminum rolling and drawing.....	2,962.1	MG
33521	Aluminum and aluminum-base alloy wire made in aluminum rolling mills.....	85.8	MG
33522	Aluminum plate and sheet.....	1,457.6	MG
33523	Plain aluminum foil.....	204.9	MG
33524	Rolled aluminum rod, bar, etc.....	289.7	HG
33525	Extruded aluminum shapes.....	597.0	MG
33526	Aluminum tube, etc.....	184.5	MG
33527	Aluminum ingot made in aluminum rolling mills.....	53.6	D
33528	Aluminum extrusion billet made in aluminum rolling mills.....	43.7	D
33520	Rolled and drawn aluminum, n.s.k..	45.3	VHG
3356-	Nonferrous rolling and drawing.....	922.7	MG
3357-	Nonferrous wiredrawing.....	3,233.7	MG
33571	Aluminum and aluminum-base alloy wire produced in nonferrous wiredrawing plants.....	178.5	HG
33572	Copper and copper-base alloy wire for electric transmission.....	371.4	MG
33573	Other bare nonferrous metal wire made in nonferrous wiredrawing plants.....	44.1	MG
33574	Communication wire and cable....	848.5	MG
33575	Nonferrous woven wire products made in nonferrous wiredrawing plants.....	37.0	MG
33576	Appliance wire and cord.....	178.7	HG
33577	Magnet wire.....	406.4	MG
33578	Power wire and cable.....	377.8	MG
33579	Other insulated wire and cable, n.e.c.....	740.1	MG
33570	Drawn and insulated nonferrous wire, n.s.k.....	51.2	VHG
3361-	Aluminum castings.....	961.3	HG
3362-	Brass, bronze, copper castings.....	404.1	MG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3369-	Nonferrous castings, n.e.c.	602.1	HG
3391-	Iron and steel forgings	1,389.4	S
33911	Drop, upset, and press steel forgings (closed-die)	1,094.6	MG
33919	Open-die or smith forgings produced from purchased materials	273.2	MG
33910	Iron and steel forgings, n.s.k.	21.6	D
3392-	Nonferrous forgings	320.7	VHG
3399-	Primary metal products, n.e.c.	649.2	VHG
33991	Metal powders and paste	248.8	HG
33992	Other primary metal products	46.3	HG
33996	Heat treating of metal for the trade	307.2	HG
33990	Primary metal products, n.s.k.	46.9	VHG
3411-	Metal cans	2,960.4	MG
3421-	Cutlery	303.6	MG
34211	Cutlery, scissors, shears, trimmers, and snips	129.8	S
34212	Razor blades and razors, except electric	164.7	MG
34210	Cutlery, n.s.k.	9.1	VHG
3423-	Hand and edge tools, n.e.c.	819.0	MG
34231	Mechanics' hand service tools	421.3	MG
34232	Edge tools, hand operated	137.4	S
34233	Files, rasps and other handtools	204.0	MG
34230	Edge and handtools, n.s.k.	56.3	VHG
3425-	Handsaws and saw blades	152.1	MG
3429-	Hardware, n.e.c.	2,395.2	MG
34291	Transportation equipment hardware	1,118.0	MG
34292	Furniture hardware	127.5	MG
34293	Vacuum and insulated bottles, etc.	62.9	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
34294	Builders' hardware	665.3	MG
34295	Other hardware	362.6	MG
34290	Hardware, n.s.k.	58.9	HG
3431-	Metal sanitary ware	(S)	D
3432-	Plumbing fittings, brass goods	419.1	D
3433-	Heating equipment, nonelectric	1,066.7	D
34331	Oil burners, except parts	53.1	D
34332	Warm air furnaces (except floor and wall), except parts	254.8	S
34333	Cast iron heating boilers, etc.	165.8	S
34334	Domestic heating stoves, except electric, except parts	66.1	S
34335	Steel heating boilers	67.3	D
34336	Other heating equipment except electrical, including parts for non electric equipment	404.6	MG
34330	Heating equipment, nonelectric, n.s.k.	55.0	HG
3441-	Fabricated structural steel	2,581.2	MG
34411	Fabricated structural metal for buildings	1,518.5	MG
34412	Fabricated structural metal for bridges	291.5	MG
34413	Other fabricated structural metal	527.5	HG
34410	Fabricated structural steel, n.s.k.	243.7	HG
3442-	Metal doors, sash, and trim	1,407.1	S
34421	Metal doors and frames, except storm doors	412.8	MG
34422	Metal window sash and frames, except storm sash	329.7	S
34423	Metal molding and trim and store fronts	168.0	S
34424	Metal combination screen and storm sash and doors	233.4	D
34425	Metal window and door screens	62.3	S
34420	Metal doors, sash, trim, n.s.k.	200.9	VHG
3443-	Platework (boiler shops)	2,587.6	MG
34431	Heat exchangers and steam condensers	377.0	HG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
34432	Fabricated steel plate	521.0	MG
34433	Steel power boilers and parts	557.6	MG
34434	Gas cylinders	72.8	MG
34435	Metal tanks, complete at factory (standard line, pressure)	131.7	D
34437	Metal tanks, complete at factory (standard line, nonpressured)	185.4	S
34438	Metal tanks custom-made at factory	404.0	HG
34439	Metal tanks custom-made and field erected	195.9	HG
34430	Boiler shops products, n.s.k.	142.2	HG
3444–	Sheet metalwork	1,837.5	MG
34441	Sheet metal roofing, etc.	481.3	MG
34442	Culverts, flumes, irrigation pipes	187.9	S
34443	Other sheet metalwork	853.2	S
34440	Sheet metalwork, n.s.k.	315.1	HG
3446–	Architectural metalwork	459.8	D
3449–	Miscellaneous metalwork	1,193.9	HG
34492	Prefabricated metal buildings and parts	421.2	HG
34493	Miscellaneous metal building materials	680.4	MG
34490	Miscellaneous metalwork, n.s.k.	92.3	HG
3451–	Screw machine products	1,110.4	HG
3452–	Bolts, nuts, rivets, and washers	1,739.4	MG
34521	Bolts and other standard industrial fasteners	1,077.4	S
34522	Special industrial fasteners	406.1	MG
34523	Headed products (produced by cold and hot heading), other than industrial fasteners	228.8	HG
34520	Bolts, nuts, etc., n.s.k.	27.1	VHG
3461–	Metal stampings, including automotive	6,353.6	S
34611	Vitreous enameled products	64.5	D
34612	Job stampings, except automotive	1,196.7	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
34613	Job stampings, automotive	3,903.4	MG
34614	Stamped and spun cooking utensils, aluminum	172.9	MG
34615	Stamped and spun cooking utensils, except aluminum	152.5	MG
34616	Metal commercial and home canning closures, except crowns	220.3	MG
34617	Metal crowns	81.0	D
34618	Other stamped and pressed metal end-products	386.9	MG
34610	Metal stampings, n.e.c.	175.4	HG
3471-	Plating and polishing	843.7	MG
3479-	Metal coating and allied services	471.1	HG
3481-	Miscellaneous fabricated wire products	1,369.6	S
34811	Noninsulated ferrous wire rope, etc., not produced by wiredrawers	89.2	D
34812	Precision mechanical springs	227.8	MG
34813	Other wire springs	303.2	S
34814	Ferrous woven wire products not produced by wiredrawers	49.2	D
34815	Nonferrous woven wire products not produced by wiredrawers	69.8	MG
34816	Fencing, not produced by wiredrawers	59.5	D
34819	Other fabricated wire products not produced by wiredrawers	451.6	MG
34810	Fabricated wire products, n.e.c., n.s.k.	119.3	HG
3491-	Metal barrels, drums, pails	403.5	MG
34911	Steel shipping pails (12-gallon capacity or under)	116.9	MG
34912	Steel shipping barrels and drums (over 12-gallon capacity)	227.0	S
34913	All other metal barrels	52.1	S
34910	Metal barrels, drums, pails, n.s.k.	7.5	VHG
3492-	Safes and vaults	94.6	S

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3493–	Steel springs	310.3	S
3494–	Valves and pipefittings	2,226.9	MG
3494X	Automatic, plumbing and heating, and other valves and fittings, including 34941, 2, 3, 4, 5, 6	2,140.4	MG
34940	Valves and pipefittings, n.s.k.	86.5	VHG
3496–	Collapsible tubes	50.3	MG
3497–	Metal foil and leaf	389.7	VHG
3498–	Fabricated pipe and fittings	517.9	MG
3499–	Fabricated metal products, n.e.c.	1,293.0	VHG
3511–	Steam engines and turbines	1,156.8	D
35111	Steam, gas, hydraulic turbine generator set units and parts	762.9	HG
35112	Steam, gas, and hydraulic turbines and parts, including n.s.k. 35110.	393.8	HG
3519–	Internal combustion engines	2,486.8	MG
35191	Gasoline engines under 11 hp., except, aircraft, automotive truck, bus, tank; and 35192, over 11 hp	458.9	MG
35193	Diesel engines, except trucks, buses	465.6	MG
35194	Diesel engines (trucks and buses).	285.1	MG
35196	Gas engines, except gas turbines..	20.3	S
35197	Tank and converted internal combustion engines, including 35195, outboard motors	411.8	HG
35199	Parts and accessories for internal combustion engines	834.9	HG
35190	Internal combustion engines, n.s.k.	10.2	VHG
3522–	Farm machinery	4,050.6	MG
35221	Wheel tractors and attachments, except garden and contractors'..	1,172.7	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
35222	Dairy machines, sprayers, and dusters, elevators, blowers, garden tractors, and motor tillers...	438.4	D
35223	Planting and fertilizing machinery..	200.0	HG
35224	Plows, listers, harrows, rollers, pulverizers, and stalk cutters....	287.9	MG
35225	Harvesting machinery.....	627.6	MG
35226	Haying machinery.....	159.8	MG
35227	Lawn mowers and snowblowers....	499.3	HG
35228	All other farm machinery and parts.	534.7	HG
35220	Farm machinery and equipment, n.s.k.....	130.2	HG
3531-	Construction machinery.....	4,090.0	MG
35311	Contractors' off-highway wheel tractors, except parts.....	108.4	D
35312	Tracklaying type tractors, except parts and attachments.....	469.0	S
35313	Parts and attachments for tracklaying and contractors' off-highway wheel tractors and shovel loaders.....	614.3	HG
35314	Power cranes, draglines, shovels, and parts.....	702.8	MG
35316	Mixers, pavers, etc., except parts..	168.0	MG
35317	Tractor-shovel loaders, except parts and attachments.....	513.2	MG
35318	Scrapers, off-highway, trucks, etc., except parts.....	754.5	MG
35319	Other construction machinery and equipment., and parts and attachments.....	705.8	MG
35310	Construction machinery, n.s.k.....	54.1	HG
3532-	Mining machinery.....	526.5	MG
35321	Underground mining equipment...	113.6	MG
35322	Crushing, pulverizing, and screening machinery.....	80.3	MG
35323	All other mining machinery and equipment.....	53.1	S
35324	Parts and attachments for mining machinery and equipment.....	237.4	MG
35320	Mining machinery and equipment, n.s.k.....	30.0	VHG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3533-	Oilfield machinery	742.5	S
35331	Rotary oil and gas drilling machinery	278.0	S
35332	Other oil and gas drilling machinery and equipment	46.5	MG
35333	Oil and gas field production machinery and equipment except pumps	286.2	S
35334	Other oil and gas field machinery and tools, except pumps, including water well	81.2	S
35330	Oilfield machinery, n.s.k.	50.6	VHG
3534-	Elevators and moving stairways	313.6	VHG
3535-	Conveyors and conveying equipment.	673.7	MG
35351	Conveyors for conveying equipment, except hoists and farm elevators	495.3	MG
35352	Parts, attachments, and accessories for conveying systems	125.1	MG
35350	Conveyors, n.s.k.	53.3	VHG
3536-	Hoists, cranes, and monorails	430.2	VHG
35361	Hoists	175.5	MG
35362	Overhead cranes and monorails	228.2	HG
35360	Hoists, cranes, monorails, n.s.k.	26.5	VHG
3537-	Industrial trucks and tractors	837.8	VHG
3541-	Machine tools, metal-cutting	1,824.6	VHG
35411	Boring machines	112.7	HG
35412	Drilling machines	112.7	HG
35413	Gear-cutting and finishing machinery	68.5	MG
35414	Grinding and polishing machines, except geartooth grinding, honing, lapping, polishing, and buffing machines	265.8	MG
35415	Lathes	324.2	HG
35416	Milling machines	237.4	HG
35418	Other machine tools	394.3	HG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
35419	Parts for metal-cutting machines sold separately, and rebuilt machine tools	247.1	MG
35410	Machine tools, metal-cutting, n.s.k.	61.9	VHG
3542-	Machine tools, metal-forming	693.5	MG
35421	Punching, shearing, bending and forming machines	155.0	HG
35422	Presses, including forging	234.5	MG
35423	Other metal-forming machine tools.	137.9	MG
35424	Parts for metal-forming machine tools and rebuilt machines	136.2	D
3544-	Special dies, tools, jigs	2,502.7	HG
35441	Special dies and tools, die sets, jigs, and fixtures	1,807.1	S
35442	Industrial molds	473.7	HG
35440	Special dies, tools, jigs, n.s.k.	221.9	HG
3545-	Machine tool accessories	1,186.1	HG
35451	Small cutting tools	761.3	MG
35452	Precision measuring tools	135.8	MG
35453	Other attachments and accessories for machine tools	222.5	MG
35450	Machine tool accessories, n.s.k.	66.5	VHG
3548-	Metalworking machinery, n.e.c.	1,033.9	HG
35481	Rolling mill machinery and equipment	302.7	MG
35482	Power-driven handtools	456.1	MG
35483	Welding and cutting apparatus, except electric	71.5	S
35484	Automotive maintenance equipment	74.5	MG
35485	Other metalworking machinery	93.2	HG
35480	Metalworking machinery, n.e.c., n.s.k.	35.9	VHG
3551-	Food products machinery	728.8	MG
35511	Dairy machinery and equipment	86.9	MG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
35512	Commercial food production machinery	159.8	S
35513	Other industrial food production machinery, including parts	411.7	MG
35510	Food products machinery, n.s.k.	70.4	HG
3552-	Textile machinery	662.6	MG
35521	Textile machinery	358.8	S
35522	Parts and attachments for textile machinery	276.6	S
35520	Textile machinery, n.s.k.	27.2	VHG
3553-	Woodworking machinery	302.1	MG
35531	Woodworking machinery except home	250.5	S
35532	Woodworking machinery, for home workshop, except power-driven handtools	35.7	MG
35530	Woodworking machinery, n.s.k.	15.9	VHG
3554-	Paper industries machinery	496.3	MG
3555-	Printing trades machinery	704.1	HG
35551	Printing presses	283.4	HG
35552	Other printing trades machinery	386.1	MG
35550	Printing trades machinery, n.s.k.	34.6	HG
3559-	Special industry machinery	1,797.9	HG
35591	Chemical manufacturing industrial machinery	247.3	MG
35592	Foundry machinery, except patterns	144.6	MG
35593	Plastics-working machinery, except patterns and molds	270.6	MG
35594	Rubber-working machinery, except tire molds	119.9	MG
35595	Other special industrial machinery	934.6	MG
35590	Special industrial machinery, n.e.c., n.s.k.	80.9	VHG
3561-	Pumps and compressors	1,988.4	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
35611	Industrial pumps, except hydraulic fluid power pumps.....	442.4	MG
35612	Hydraulic fluid power pumps and motors; vacuum pumps.....	243.5	MG
35613	Domestic water systems and pumps.....	151.4	HG
35614	Air and gas compressors, except refrigeration compressors.....	486.3	MG
35615	Pumps and compressors, n.e.c., except refrigeration compressors.....	246.4	MG
35616	Parts for pumps and compressors.	369.0	MG
35610	Pumps and compressors, n.s.k....	49.4	VHG
3562-	Ball and roller bearings.....	1,285.5	MG
35621	Ball bearings, complete.....	468.4	S
35622	Taper and other bearings, complete, including 35623.....	605.1	S
35624	Mounted bearings.....	89.9	MG
35629	Ball and roller bearings, parts.....	114.8	HG
35620	Ball and roller bearings, n.s.k.....	7.3	VHG
3564-	Blowers and fans.....	491.7	MG
35641	Industrial fans and blowers.....	277.0	MG
35642	Air purification equipment.....	197.1	HG
35640	Blowers and fans, n.s.k.....	17.6	MG
3565-	Industrial patterns.....	216.6	MG
3566-	Power transmission equipment.....	1,321.0	MG
35661	Plain bearings.....	114.0	S
35662	Speed changers, industrial high-speed drives, and gears.....	527.6	MG
35663	Other mechanical power transmission equipment.....	640.7	MG
35660	Power transmission equipment, n.s.k.....	38.7	VHG
3567-	Industrial furnaces and ovens.....	376.7	HG
35671	Electric industrial furnances and ovens, metal processing.....	99.5	HG

2907

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
35672	Fuel-fired industrial furnaces and ovens, metal processing	137.5	MG
35673	High frequency induction and dielectric heating equipment and parts for industrial furnaces and ovens	121.0	MG
35670	Industrial furnaces and ovens, n.s.k.	18.7	VHG
3569-	General industrial machinery	965.0	HG
3571-	Computing and related machines	4,929.6	VHG
3572-	Typewriters	481.2	MG
3576-	Scales and balances	131.7	MG
3579-	Office machines, n.e.c.	449.0	MG
3581-	Automatic merchandising machines	288.2	MG
35811	Automatic merchandising machines	225.6	MG
35812	Coin-operated mechanisms and parts	50.9	HG
35810	Automatic vending machines, n.s.k.	11.7	MG
3582-	Commercial laundry equipment	215.0	MG
3585-	Refrigeration machinery	3,830.8	HG
35851	Heat transfer equipment including 35852, room and unitary air conditioners	2,245.3	HG
35853	Commercial refrigeration equipment	376.9	MG
35854	Compressors and compressor units	563.7	HG
35855	Condensing units	77.6	S
35857	Other refrigeration and air-conditioning equipment	510.1	MG
35850	Refrigeration machinery, n.s.k.	57.2	HG
3586-	Measuring and dispensing pumps	155.1	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3589-	Service industry machines, n.e.c.....	613.1	VHG
35891	Commercial cooking equipment...	215.1	HG
35892	Service industrial machinery and parts.....	319.0	MG
35893	Commercial and industrial vacuum cleaners, including parts.....	27.6	MG
35890	Service industrial machinery, n.s.k..	51.4	VHG
3599-	Miscellaneous machinery, nonelectrical, except shop jobwork, 35993..	1,999.8	HG
3611-	Electric measuring instruments.....	1,192.1	MG
36111	Integrating instruments, electric	112.3	S
36112	Equipment for testing circuits.....	746.0	HG
36113	Other electric measuring instruments.....	301.3	MG
36110	Electric measuring instruments, n.s.k.....	32.5	VHG
3612-	Transformers.....	1,258.8	MG
36121	Natural-draft dry-type transformers (specialty).....	234.5	MG
36122	Power and distribution transformers, except parts.....	856.5	HG
36123	Power regulators, booster, etc., and transformer parts.....	154.3	MG
36120	Transformers, n.s.k.....	13.6	VHG
3613-	Switchgear and switchboards.....	1,675.1	MG
36131	Switchgear, including 36136, 36137, ducts and relays.....	719.7	MG
36132	Power circuit breakers, including 36135, circuit breakers.....	403.7	HG
36133	Switching and interrupting devices, 750 v and under.....	441.7	MG
36134	Fuses and fuse equipment under 2300 v, except power distribution cutouts.....	70.4	MG
36130	Switchgear and switchboard apparatus, n.s.k.....	39.7	VHG
3621-	Motors and generators.....	2,356.0	MG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
36211	Fractional horsepower motors.....	913.9	MG
36212	Integral horsepower motors and generators, except land transportation.....	538.6	MG
36213	Land transportation motors, generators, and control equipment..	134.0	MG
36214	Prime mover generator sets, except steam or hydraulic turbine..	199.4	HG
36215	Motor-generator sets and other rotating equipment.....	358.1	MG
36216	Parts for motors, generators, and motor-generator sets, except for land transportation equipment..	176.3	MG
36210	Motors and generators, n.s.k.....	35.7	HG
3622-	Industrial controls.....	1,107.2	VHG
3623-	Welding apparatus.....	456.8	HG
36231	Arc welding machinery, etc., except electrodes.....	184.3	S
36232	Arc welding electrodes, metal.....	157.7	S
36233	Resistance welders and parts.....	109.9	MG
36230	Electric welding equipment, n.s.k..	4.9	VHG
3624-	Carbon and graphite products.....	288.3	MG
3629-	Electrical industrial goods, n.e.c.....	432.0	S
36291	Capacitors for industrial use, except for electronic applications..	116.7	HG
36292	Rectifying apparatus.....	152.5	MG
36293	Other electrical equipment for industrial use.....	150.2	S
36290	Electrical industrial goods, n.e.c., n.s.k.....	12.6	HG
3631-	Household cooking equipment.....	733.1	S
36311	Electric household ranges, etc.....	404.7	MG
36312	Household ranges, etc., nonelectric	327.2	MG
36310	Household cooking equipment, n.s.k.....	1.2	HG
3632-	Household refrigerators.....	1,168.6	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
36321	Household refrigerators	1,006.9	MG
36322	Home and farm freezers	160.4	S
36320	Household refrigerators, n.s.k.	1.4	VHG
3633-	Household laundry equipment	1,031.6	S
36331	Household washing machines and dryers	937.4	S
36332	Other household laundry equipment and parts	90.9	MG
36330	Household laundry equipment, n.s.k.	3.3	VHG
3634-	Electric housewares and fans	1,106.2	HG
36341	Electric fans, except industrial	120.0	MG
36342	Electric razors and dry shavers	65.9	S
36343	Other small household electric appliances	833.2	MG
36344	Parts for small household electric appliances	64.4	MG
36340	Electric housewares and fans, n.s.k.	22.7	HG
3635-	Household vacuum cleaners	276.0	VHG
3636-	Sewing machines	129.2	D
3639-	Household appliances, n.e.c.	574.4	D
36391	Household water heaters, electric	73.2	S
36392	Household water heaters, non-electric	137.7	D
36393	Other household appliances	354.2	MG
36390	Household appliances, n.e.c., n.s.k.	9.3	VHG
3641-	Electric lamps	831.0	MG
3642-	Lighting fixtures	1,658.4	MG
36421	Residential type electrical fixtures, except portable	222.8	MG
36422	Commercial and institutional type electric fixtures	408.1	MG
36423	Industrial type electric fixtures	127.9	HG
36424	Vehicular lighting equipment, electric	281.5	MG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
36425	Outdoor lighting equipment	217.9	MG
36426	Other lighting equipment, including portable	131.2	MG
36427	Residential type electric fixtures (portable)	194.0	S
36420	Lighting fixtures, n.s.k.	75.0	HG
3643-	Current-carrying wiring devices	833.6	S
3644-	Noncurrent-carrying devices	645.1	S
36441	Pole line and transmission hardware	148.4	MG
36442	Electric conduit and fittings	346.2	MG
36443	Other noncurrent-carrying wiring devices and supplies	147.2	MG
36440	Noncurrent-carrying devices, n.s.k.	3.2	MG
3651-	Radio and TV receiving sets	3,804.1	VHG
36511	Household and auto radios and radiophonograph combinations	810.2	MG
36512	Household TV receivers	2,301.8	HG
36514	Audio equipment and accessories, including 36515	673.9	MG
36510	Radio and TV receiving sets, n.s.k.	18.2	HG
3652-	Phonograph records	315.2	VHG
3661-	Telephone, telegraph apparatus	2,441.7	HG
36611	Telephone switching equipment	941.1	MG
36612	Other telephone and telegraph apparatus, equipment	1,491.6	MG
36610	Telephone and telegraph apparatus, n.s.k.	9.0	VHG
3662-	Radio, TV communication equipment	8,309.6	VHG
36621	Communication equipment, nonhousehold, including 36629	1,763.8	HG
36622	Radio and TV broadcast equipment	359.4	HG
36623	Intercommunication and electric alarms	253.8	MG
36624	Electronic navigational aids	1,184.7	MG

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
36625	Electronic search and detection equipment	2,135.0	MG
36626	Electronic military equipment, n.e.c.	1,538.7	HG
36627	Space satellite stations	60.6	S
36628	Missile-borne guidance systems	849.3	S
36620	Radio and TV equipment, n.s.k.	164.3	VHG
3671-	Electron tubes, receiving type	247.5	D
3672-	Cathode ray picture tubes	718.9	VHG
3673-	Electron tubes, transmitting	401.9	D
3674-	Semiconductors, n.s.k.	1,294.5	VHG
3679-	Electronic components, n.e.c.	4,298.2	VHG
36792	Capacitors for electronic applications	452.2	MG
36793	Resistors for electronic applications	428.9	MG
36794	Coils, transformers, reactors, for electronic applications	418.1	MG
36795	Other electronic accessories, n.e.c.	2,808.9	HG
36790	Electronic components, n.s.k.	190.1	VHG
3691-	Storage batteries	628.9	MG
36911	Storage batteries, SLI type	437.7	S
36912	Storage batteries, except SLI type, including parts	159.2	S
36910	Storage batteries, n.s.k.	32.0	HG
3692-	Primary batteries, dry and wet	309.7	MG
3693-	X-ray apparatus and tubes	182.6	HG
3694-	Engine electrical equipment	1,306.5	HG
36941	Ignition harness and cable sets	71.2	MG
36942	Battery charging generators	285.9	MG
36943	Cranking motors	223.8	HG
36944	Spark plugs	208.8	MG
36945	Other complete electrical equipment for internal combustion engines	329.3	MG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
36946	Parts for engine electrical equipment	157.3	MG
36940	Engine electrical equipment, n.s.k.	30.2	VHG
3699-	Electrical equipment, n.e.c.	356.8	HG
36992	Lamp bulb components and other electrical products	210.9	MG
36996	Appliance wire and cord (manufactured from purchased materials)	108.3	MG
36990	Electrical equipment, n.s.k.	37.6	VHG
3711-	Motor vehicles, including 3712	32,085.0	MG
37111	Passenger cars	24,072.3	MG
37112	Truck tractors, chassis	5,337.6	MG
37113	Buses and fire department vehicles	181.7	S
37115	Passenger car bodies, including 37114, combat vehicles	2,473.5	S
3713-	Truck and bus bodies	667.0	HG
3714-	Motor vehicle parts and accessories	14,167.6	MG
37141	Parts and accessories for motor vehicles, except kits and rebuilt	13,774.7	D
37143	Rebuilt engines and parts for motor vehicles, except carburetors	208.5	MG
37140	Motor vehicle parts and accessories, n.s.k.	184.4	S
3715-	Truck trailers	748.5	HG
3721-	Aircraft	10,716.0	S
37211	Complete aircraft, military	4,568.2	HG
37212	Complete aircraft, personal, utility, and commercial transport type, including 37213	4,746.0	VHG
37214	Modification of previously accepted aircraft	588.9	HG
37216	Other aeronautical services for aircraft	784.3	MG
37210	Aircraft, n.s.k.	28.6	VHG
3722-	Aircraft engines and parts	4,922.0	MG

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TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
37221	Aircraft engines for U.S. military customers	1,033.5	HG
37222	Aircraft engines, except for U.S. military customers	838.3	HG
37223	Aeronautical services on aircraft engines	558.9	MG
37224	Aircraft engine parts and accessories	1,552.8	HG
37225	Complete missile or space vehicles engines and/or propulsion units.	373.0	D
37226	R and D on complete missile or space vehicle engines	370.3	D
37227	All other services on complete missile or space vehicle engines	82.3	MG
37228	Missile and space vehicle engine parts and accessories	80.7	D
37220	Aircraft engines and parts, n.s.k.	32.2	VHG
3729-	Aircraft equipment, n.e.c.	5,989.0	D
37291	Aircraft parts and accessories, n.e.c.	4,575.1	HG
37292	Missile and space vehicle parts and subassemblies, n.e.c.	657.2	D
37293	R and D on aircraft parts	102.8	MG
37294	R & D on missile and space vehicle parts and components, n.e.c.	428.4	S
37295	Aircraft propellers and parts	113.7	HG
37290	Aircraft equipment, n.e.c., n.s.k.	111.8	VHG
3731-	Shipbuilding and repairing	2,381.7	MG
37311	Nonpropelled ships, new construction	139.1	S
37312	Self-propelled ships, U.S. military, new construction	893.2	MG
37313	Self-propelled ships, nonmilitary, new construction	492.0	HG
37314	Ship repair, U.S. military	362.9	HG
37316	Repair of nonmilitary ships	455.1	MG
37310	Shipbuilding and repairing, n.s.k.	39.4	VHG
3732-	Boat building and repairing	570.8	MG
37321	Inboard motor boats	257.6	HG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
37322	Outboard motor boats	73.4	MG
37323	All other boats (sail, canoes)	62.8	S
37324	Boat repair	80.5	HG
37320	Boat building and repairing, n.s.k.	96.5	HG
3741-	Locomotives and parts, including n.s.k., 37410	485.3	MG
37411	Locomotives, new and rebuilt, railroad service and switching type	277.2	VHG
37412	Mining and industrial locomotives	2.7	D
37413	Parts for locomotives for sale separately	203.6	D
3742-	Railroad and street cars	1,049.0	VHG
37421	Passenger train cars, new	4.1	D
37422	Freight train cars, new	685.7	S
37423	Street cars and all parts and accessories	351.3	D
37420	Railroad and street cars, n.s.k.	7.9	VHG
3751-	Motorcycles, bicycles, and parts	307.6	HG
3791-	Trailer coaches	1,737.9	VHG
3799-	Transportation equipment, n.e.c.	396.2	VHG
37991	Auto trailers, except housing	121.6	MG
37992	Other transportation equipment	236.9	HG
37990	Transportation equipment, n.e.c., n.s.k.	37.7	HG
3811-	Scientific instruments	1,104.7	D
38111	Navigational and scientific instruments, including 38112	920.2	HG
38113	Survey and drafting instruments	140.9	MG
38110	Scientific instruments, n.s.k.	43.6	VHG
3821-	Mechanical measuring devices	1,339.3	HG
38211	Aircraft engine instruments, except flight	108.4	HG
38212	Integrating meters, nonelectric	195.8	MG
38213	Industrial process instruments	722.9	MG

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TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
38214	Motor vehicle instruments, non-electric	56.3	HG
38216	Other mechanical measuring instruments	219.2	HG
38210	Mechanical measuring devices, n.s.k.	36.7	VHG
3822-	Automatic temperature controls	550.5	MG
3831-	Optical instruments and lenses	481.6	VHG
38311	Optical instruments and lenses, except sighting and fire control	382.2	HG
38312	Sighting and fire control equipment from lenses produced at same establishment	60.0	HG
38310	Optical instruments and lenses, n.s.k.	39.4	VHG
3841-	Surgical and medical instruments	572.0	VHG
3842-	Surgical appliances and supplies	793.0	HG
38421	Surgical, orthopedic, prosthetic appliances and supplies	559.8	HG
38423	Personal industrial safety devices	161.3	MG
38424	Electronic hearing aids	44.5	MG
38420	Surgical appliances and supplies, n.s.k.	27.4	VHG
3843-	Dental equipment and supplies	235.7	HG
3851-	Ophthalmic goods	379.7	MG
3861-	Photographic equipment	3,505.2	VHG
38611	Still picture equipment	483.6	HG
38612	Photocopying equipment, including 38614 and 38610	849.8	HG
38613	Motion picture equipment	184.2	MG
38615	Photographic sensitized film	1,202.7	HG
38616	Sensitized photographic paper and cloth, silver halide type	255.5	MG
38617	Sensitized photo paper and cloth, other than silver halide type	240.2	HG
38618	Prepared photographic chemicals	204.6	HG

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3871-	Watches and clocks	686.2	MG
38711	Clocks	302.0	HG
38714	Watches with imported movements	178.4	MG
38715	Watches with domestic movements and parts for all clocks and watches, including n.s.k., 38710	205.8	HG
3872-	Watchcases	51.8	HG
3911-	Jewelry, precious metal	723.8	HG
39111	Jewelry, platinum or gold	546.1	MG
39112	Jewelry, precious metals, except platinum or gold	124.9	MG
39110	Jewelry, precious metal, n.s.k.	52.8	VHG
3912-	Jewelers' findings and materials	131.2	MG
3913-	Lapidary work	99.3	D
3914-	Silverware and plated ware	324.4	S
39141	Silver, plated, and stainless steel ware	134.5	MG
39142	Flatware	179.3	MG
39140	Silverware and plated ware, n.s.k.	10.6	HG
3931-	Musical instruments and parts	442.7	HG
39311	Pianos	96.5	S
39312	Organs	141.1	S
39313	Piano and organ parts	49.8	S
39314	Other musical instruments and parts	146.8	MG
39310	Musical instruments and parts, n.s.k.	8.5	VHG
3941-	Games and toys	1,087.6	HG
3942-	Dolls	239.7	D
3943-	Children's vehicles	115.6	D

TABLE II: Volume of Shipments and Growth Characteristics of Selected Industries and Product Classes cont.

SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3949–	Sporting and athletic goods, n.e.c....	929.3	MG
39491	Fishing tackle and equipment.....	120.4	MG
39492	Golf and athletic equipment, including 39493.....	734.3	MG
39490	Sporting and athletic goods, n.s.k..	74.6	VHG
3951–	Pens and mechanical pencils.....	228.0	S
3952–	Lead pencils and art goods.....	133.3	MG
39521	Lead pencils and crayons.....	74.3	S
39522	Artists' materials.....	54.9	MG
39520	Lead pencils and art goods, n.s.k..	4.1	VHG
3953–	Marking devices.....	121.7	VHG
3955–	Carbon paper and inked ribbons.....	221.9	S
3961–	Costume jewelry.....	388.0	D
3962–	Artificial flowers.....	95.7	D
3963–	Buttons.....	100.9	D
3964–	Needles, pins, and fasteners.....	426.9	MG
39641	Zippers and slide fasteners.....	213.1	MG
39642	Needles, pins, fasteners (except slide), and similar notions.....	193.5	S
39640	Needles, pins, fasteners, n.s.k.....	20.3	HG
3991–	Brooms and brushes.....	311.0	S
39911	Brooms.....	33.8	D
39912	Paint and varnish brushes.....	96.4	MG
39913	Other brushes.....	159.1	S
39910	Brooms and brushes, n.s.k.....	21.7	HG
3993–	Signs and advertising displays.....	798.7	MG
39931	Luminous tubing and bulb signs...	195.1	MG
39932	Nonelectric signs and advertising displays.....	374.0	MG
39923	Advertising specialties.....	102.0	S
39930	Signs and advertising displays, n.s.k.....	127.6	HG

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SIC code	Industry	1968 Value of shipments (millions of dollars)	Growth category
3994-	Morticians' goods	304.3	D
39941	Metal caskets, lined and trimmed	139.1	S
39942	Wood caskets, lined and trimmed	70.5	S
39943	Other caskets, vaults, supplements	74.2	MG
39940	Morticians' goods, n.s.k.	20.5	HG
3996-	Hard-surface floor coverings	200.8	D
39961	Linoleum, including 39962	198.7	S
39960	Hard surface floor coverings, n.s.k.	2.1	HG
3999-	Manufactures, n.e.c.	961.5	MG
39991	Chemical fire extinguishing equipment and parts	92.6	HG
39992	Coin-operated amusement machines	50.9	HG
39993	Matches	71.1	S
39994	Candles	61.1	MG
39995	Lampshades	31.1	D
39996	Furs, dressed and dyed	46.8	S
39997	Umbrellas, parasols, and canes	43.9	MG
39999	Other miscellaneous fabricated products	421.4	S
39990	Manufactures, n.e.c., n.s.k.	142.6	VHG

n.e.c. = not elsewhere classified
n.s.k. = not specified by kind
NA = not available
(D) = Withheld to avoid disclosing figures for individual companies.
(S) = Census estimate withheld as not meeting publication standards.

General note: Figures shown for 1968 value of shipments are based on the *Annual Survey of Manufactures, 1968*, "Value of Shipments by Classes of Products," M68(AS)-2; and upon the *1967 Census of Manufactures*. In a number of instances the 1968 values are preliminary and, for a small number of cases, have been estimated on the basis of related data.

TABLE III

Example of Table I Data Use, List of Growth Industries With Selected Characteristics

DESCRIPTION OF CONTENTS

Table III is an example of one use of the basic Table I information. It lists 74 industries (selected from Table I) having five characteristics in common: a moderate or better growth trend, a moderate to very low capital investment, a moderate to very low average wage rate, a moderate to very high percentage of blue collar workers, and a moderate to very high labor intensity.

Industries having these five characteristics in common probably have a high potential for area development, since their locational requirements normally place considerable emphasis on the availability of an abundance of blue collar type labor. In addition, some communities will be interested in industry wage rates as an indicator of the degree of skills demanded by the industry.

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As stated before, Table III is merely an example of a use of the data in Table I. Many other select lists of industries can be constructed by scanning Table I data symbols or a combination of symbols.

Criteria used and key to symbols

Table III is a list of industries with five characteristics in common based on information shown in Table I:

(1) a moderate or better growth trend, symbols MG, HG, VHG;

(2) a moderate to very low capital investment, symbols M, L, VL;

(3) a moderate to very low average wage rate, symbols M, L, or VL;

(4) a moderate to very high percentage of blue collar workers, symbols M, H, VH; and

(5) a moderate to very high labor intensity (production worker wages as a percentage of value added), symbols M, H, or VH.

The columns show the SIC code, the number of employees, since labor characteristics make up the main basis for this table, and the Table I growth category.

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TABLE III: Example of Table 1 Data Use, List of Growth Industries With Selected Characteristics

SIC code	Industry	Number employees (thousands)	Growth category
2022	Cheese, natural and processed	20.0	MG
2036	Fresh or frozen packaged fish	21.4	MG
2063	Beet sugar	11.5	MG
2256	Knit fabric mills	36.3	VHG
2295	Coated fabrics, not rubberized	17.5	VHG
2299	Textile goods, n.e.c.	9.2	HG
2327	Men's and boys' separate trousers	88.1	VHG
2331	Women's and misses' blouses	56.1	MG
2385	Waterproof outer garments	23.3	HG
2391	Curtains and draperies	25.7	VHG
2392	Housefurnishings, n.e.c.	46.3	MG
2394	Canvas products	15.2	HG
2491	Wood preserving	12.2	MG
2499	Wood products, n.e.c.	70.4	MG
2522	Metal office furniture	27.0	HG
2531	Public building furniture	22.6	MG
2642	Envelopes	22.5	MG
2643	Bags, except textile bags	46.3	MG
2645	Die-cut paper and board	18.6	HG
2646	Pressed and molded pulp goods	6.7	VHG
2651	Folding paperboard boxes	49.3	MG
2654	Sanitary food containers	35.3	MG
2655	Fiber cans, drums, etc.	15.7	HG
2711	Newspapers	335.9	MG
2753	Engraving and plate printing	9.0	MG
2789	Bookbinding and related work	30.3	HG
3021	Rubber footwear	29.1	HG
3069	Fabricated rubber products, n.e.c.	141.6	MG
3142	House slippers	12.5	MG
3221	Glass containers	66.7	MG
3272	Concrete products, n.e.c.	56.8	MG
3293	Gaskets and insulations	18.5	MG
3299	Nonmetallic minerals, n.e.c.	5.3	MG
3315	Steel wire and related products	27.3	MG
3361	Aluminum castings	45.2	HG
3362	Brass, bronze, copper castings	17.9	MG
3429	Hardware, n.e.c.	100.8	MG

SIC code	Industry	Number employees (thousands)	Growth category
3443	Platework (boiler shops)	96.4	MG
3444	Sheet metalwork	68.1	MG
3449	Miscellaneous metalwork	32.7	HG
3452	Bolts, nuts, rivets, and washers	67.2	MG
3491	Metal barrels, drums, pails	11.6	MG
3494	Valves and pipe fittings	95.3	MG
3496	Collapsible tubes	4.3	MG
3497	Metal foil and leaf	6.6	VHG
3498	Fabricated pipe and fittings	18.2	MG
3458	Metalworking machinery, n.e.c.	46.7	HG
3552	Textile machinery	39.7	MG
3564	Blowers and fans	21.0	MG
3566	Power transmission equipment	54.8	MG
3572	Typewriters	26.0	MG
3581	Automatic merchandising machines	10.0	MG
3582	Commercial laundry equipment	7.5	MG
3612	Transformers	45.6	MG
3613	Switchgear and switchboards	68.5	MG
3621	Motors and generators	112.8	MG
3624	Carbon and graphite products	11.9	MG
3634	Electric housewares and fans	44.6	HG
3691	Storage batteries	19.3	MG
3699	Electrical equipment, n.e.c.	13.6	HG
3713	Truck and bus bodies	30.4	HG
3715	Truck trailers	22.9	HG
3732	Boatbuilding and repairing	30.5	MG
3751	Motorcycles, bicycles, and parts	12.0	HG
3799	Transportation equipment, n.e.c.	11.2	VHG
3822	Automatic temperature controls	31.4	MG
3843	Dental equipment and supplies	10.2	HG
3851	Ophthalmic goods	25.6	MG
3871	Watches and clocks	31.5	MG
3911	Jewelry, precious metal	29.9	HG
3912	Jewelers' findings and materials	5.5	MG
3941	Games and toys	55.1	HG
3952	Lead pencils and art goods	7.9	MG
3964	Needles, pins, and fasteners	19.2	MG

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ABSTRACT - THIS ANNUAL REPORT OF THE DEPARTMENT OF AGRICULTURAL EDUCATION AT THE OHIO STATE UNIVERSITY FOR 1971-72 CONTAINS DESCRIPTIVE AND EVALUATIVE INFORMATION PERTAINING TO: (1) THE UNDERGRADUATE AND GRADUATE PROGRAMS, (2) STUDIES COMPLETED OR IN PROGRESS BY STUDENTS AND STAFF, (3) INSERVICE EDUCATION PROGRAMS, (4) INTERNATIONAL EDUCATION, (5) TECHNICAL EDUCATION, (6) CURRICULUM MATERIALS SERVICE, (7) PUBLIC INFORMATION PROGRAM, (8) FACILITIES, (9) ALUMNI ASSOCIATION, (10) LONG RANGE PLANNING ACTIVITIES, AND (11) STAFF SERVICES. SOME HIGHLIGHTS FOR THE YEAR INCLUDE: (1) THE NUMBER OF DECLARED MAJORS RANGED FROM 132 TO 156, (2) CHANGES WITHIN THE AGRICULTURAL EDUCATION COURSES INCLUDED THE PROVISION OF EARLIER PROFESSIONAL EXPERIENCES, (3) THE TOTAL UNDERGRADUATE AND GRADUATE STUDENT REGISTRATION IN AGRICULTURAL EDUCATION COURSES WAS 1,307 AS COMPARED TO 1,178 FOR 1970-1971, (4) RESEARCH WAS ACCOMPLISHED PRIMARILY THROUGH THE DOCTORAL DEGREE PROGRAM, INCLUDING SUCH AREAS OF STUDY AS CONTINUING EDUCATION FOR TECHNICAL COLLEGE GRADUATES, MANPOWER NEEDS IN ENVIRONMENTAL MANAGEMENT, AND CHARACTERISTICS OF DISADVANTAGED RURAL YOUTH, AND (5) THE CURRICULUM MATERIALS SERVICE HAS PUBLISHED 38 NEW MANUALS, FOUR SLIDE SERIES, AND ONE SET OF TRANSPARENCIES. (SB)

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Annual Report 1971-1972 Department of Agricultural Education

Issued by

DEPARTMENT OF AGRICULTURAL EDUCATION
COLLEGE OF AGRICULTURE AND HOME ECONOMICS
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in cooperation with

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FOREWORD

This is the annual report of the Department of Agricultural Education for 1971-72. The information reported herein serves somewhat as a history and as a basis for evaluation. It was prepared by the staff for the purpose of making further improvement in the Department.

Members of the agricultural education staff recognize and appreciate the significant contribution of other individuals and groups particularly the supervisors of vocational agriculture and other personnel of the State Department of Education, the administration and faculty of the College of Agriculture and Home Economics and the College of Education, personnel of the Cooperative Extension Service, and the Ohio Agricultural Research and Development Center.

Ralph E. Bender, Chairman

SOME HIGHLIGHTS

--Sixty-four students were qualified for certification to teach vocational agriculture; 40 were placed in such positions. The supply did not meet the demand even though an expanded program of recruitment has been conducted including as a new procedure the use of 10 agricultural education majors who participated in a series of FFA officer or training programs throughout the state. Nearly 1,500 students attended these meetings.

--The number of declared majors ranged from 132 to 156. This does not include freshmen and sophomores enrolled in University College who will be pursuing an agricultural education program.

--New certification standards were in effect as of January 1, 1972. They involved the preparing of prospective teachers in specialized areas of horticulture, agricultural business, agricultural equipment, food processing, agricultural resources, and forestry in addition to production agriculture.

--Changes within the agricultural education courses included the provision of earlier professional experiences. More observation and participation experience has been included in Agricultural Education 200 and the "380" series of experience courses have been changed to the 200 level in order to attract and serve sophomores. Through special consideration of the Dean's office, Agricultural Education 200 was offered for third quarter freshmen.

--Sixty-two students participated in student teaching that was provided in 29 schools and 24 County Extension centers.

--Nine undergraduates received Agricultural Education Scholarships. A new $500 scholarship provided by the Ohio Grain, Feed and Fertilizer Dealers was established.

--The total undergraduate and graduate student registration in agricultural education courses was 1,307 as compared to 1,178 a year earlier.

--265 students from 12 states and Taiwan majoring in agricultural education were enrolled in programs beyond the Bachelor's degree. Much of this enrollment was in a program of three-week workshops during the summer quarter. Off-campus courses were offered during the autumn and spring quarters.

--83 new and returning teachers of vocational agriculture were supervised by the staff in agricultural education in cooperation with Assistant State Supervisors.

--A planned program was developed and approved for the certification of personnel interested in becoming local supervisors of vocational agriculture.

--Seventeen students received the Ph.D. degree and 30 students were recipients of Master's degrees.

--A new graduate course, Analysis and Interpretation, was developed and approved for offering autumn quarter 1972.

--Research was accomplished primarily through the Ph.D. degree program including such areas of study as continuing education for technical college graduates, manpower needs in environmental management, characteristics of disadvantaged rural youth, change orientation of vocational teachers, guidelines for evaluating activities conducted by State Advisory Councils, perceived training needs of urban Extension agents, and role of area Extension agents.

--The materials published by the Ohio Agricultural Education Curriculum Materials Service during 1971-72 included 38 new manuals, 4 slide series, and one set of transparencies. In addition, hundreds of materials were made available as identified through three catalogs that are issued by the Service.

--A $260,000 USOE grant was approved for the period June 15, 1972 to June 15, 1974 for the preparation of curriculum guides pertaining to career education in agricultural business, natural resources, and environmental improvement. The project, which was planned by Dr. Harlan Ridenour, is being directed by Roger D. Roediger and includes materials in career education at various levels K-12 grades.

--Materials are being developed which deal with a cooperative way of doing business by J. H. Lintner as a project which has been funded by the Martha Holden Jennings Foundation and the Ohio Council of Farmer Cooperatives. This grant was for $20,000.

--The Ohio Farm and Home Electrification Council is contributing $1,500 for the development of materials for farm and home electrification by the Curriculum Materials Service.

--A project "Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection Programs" which was started January 1, 1971 was completed during the year. The 18-month project was funded by a $34,922.50 grant from the Division of Vocational Education, Ohio Department of Education.

--Biennial plans of the department of 1973-75 and 1975-77 including improvements and new programs were submitted to the College. The programs involved air conditioning, research and development, individualized instruction, a new communications course, preparation of specialized agricultural education personnel, youth development, curriculum development and instructional materials, and preparation of personnel for agricultural technician programs.

ANNUAL REPORT

1971-1972

The Department of Agricultural Education has responsibility for the initial preparation and continuing professional development of personnel in agricultural education. In cooperation with the Division of Vocational Education of the State Department of Education and as a part of the College of Agriculture and Home Economics of The Ohio State University, the department attempts to serve many clientele in agricultural education including teachers of agriculture in secondary schools, area vocational centers, and post-secondary institutions; Cooperative Extension personnel at the county, area, and state levels; personnel in vocational education and Cooperative Extension in administrative and supervisory positions; and other individuals needing specialized competencies in agricultural education.

The department, which is housed in the Agricultural Administration Building, comprises 13 faculty members, 7 of whom are part-time and six secretaries. Forty-six others with ranks of instructor or higher, including emeriti,have appointments in the department.

Undergraduate Program

At the end of the Spring Quarter the Department of Agricultural Education had 156 declared majors, which is a decrease from the last several years as may be noted in Table 1. It is difficult to attach causes for the decrease in enrollment. The change in the draft laws which no longer gives exemptions for teachers may have had some negative influence on enrollment. On the positive side, the employment opportunities this past year have been favorable for vocational agriculture teaching in comparison to other fields. This advantage has seemingly not influenced undergraduates to change their major or to encourage noncommitted students to declare their major in agricultural education. However, many students from other departments are taking courses in agricultural education to become certified to teach.

The number of graduates qualifying to teach vocational agriculture in the College of Agriculture and Home Economics is shown in Table 2. There were 7 fewer qualifying in the past year than in the two years previous. Another item to note is that 13 non-majors were qualified to teach, which is five less than the year before, however, high compared to 1967-68 and 1968-69. Counselors in the Department report that during the past year many students from other departments sought information regarding requirements for teaching. This interest may

reflect changes of major to agricultural education that could increase department enrollment in the future.

TABLE 1

NUMBER OF DECLARED MAJORS IN AGRICULTURAL EDUCATION

Quarter	1967-68	1968-69	1969-70*	1970-71*	1971-72*
Autumn	166	191	166	164	132
Winter	171	199	177	165	130
Spring	190	207	181	172	156

*Freshmen and some sophomores enrolled in University College.

TABLE 2

NUMBER QUALIFYING TO TEACH VOCATIONAL AGRICULTURE

Item	1967-68	1968-69	1969-70	1970-71	1971-72
Regular Graduates	51	62	58	54	51
Others	5	9	14	18	13
TOTAL	56	71	72	72	64

Course Enrollment

Enrollment in courses for agricultural education in 1971-72 and each of the four years previous is listed in Table 3. The undergraduate courses begin with 200 and include 581, 582, and 583, although

TABLE 3

ENROLLMENT IN AGRICULTURAL EDUCATION COURSES

Course Number	Number Enrolled				
	1967-68	1968-69	1969-70	1970-71	1971-72
200	122	134	133	121	154
230	83	72	81	72	65
380.01	51	75	56	35	44
380.02			1	2	3
380.03			36	39	22
420	15	12	8	17	30
581	56	64	73	73	62
582	56	64	73	73	62
583	56	64	73	73	62
621	16	13	19	24	31
622	13	3	14	3	21
631	25	33	49	33	39
640	29	20	34	12	19
641	15	17	20	16	10
642	13	13	11	43	34
684		28	52	56	
684.10					45
684.20					2
684.30					1
684.40					14
693	103	74	57	71	89
743		4		11	2
744	3	4	7	4	2
770	18	12	12	11	9
790	70	47	21		
790.12				23	17
790.15					10
790.16					16
790.20					22
790.23				14	15
790.25				12	4
794		8	22		34
795	44	41	31		
795.01				14	16
795.02				12	
795.03				40	19
795.04				19	
795.05				34	14
795.06					19
810		17	16	41	32
811	20	25	22	10	26
812	10	12	14	7	5
823	34	36	36	13	13
885	25	28	32	28	52
886		21	21	18	55
889	5	2	6	5	7
995			13	17	12
999	47	61	65	77	54

advanced undergraduates may enroll in courses beginning with 621 and including 693. However, very few undergraduates are enrolled in such courses.

It may be observed that enrollment in Agricultural Education 200 has increased and in 230 it has slightly decreased. Since 230 is primarily a junior-senior course, it is not likely that the effect of the increased enrollment in 200 will show up in 230 until 1972-73 or 1973-74. Enrollments in 380.01, 380.02, and 380.03, undergraduate experience courses, are slightly lower than for the three years previous but they, along with Agricultural Education 230, are likely to have increases in enrollment next year. It may be observed that enrollment in Agricultural Education 581, 582, and 583 is quite similar to enrollment in 230. This is what we would expect because students take 230 just previous to student teaching. As may be observed the overall numbers of undergraduate students enrolled in 1971-72 are about the same for the past two years. The indication of supply of graduates for teaching is the number of completions in student teaching and as may be observed this number is 11 less than the year before.

The outlook for graduates in 1972-73 may be influenced somewhat in the enrollment in Agricultural Education 200 and 230. Next year it would be conceivably more than the 64 completing in 1971-72. Factors altering the final outcome for next year would be an increased number of students transferring to the department from other departments particularly in their senior year, and the number of returnees with Bachelor's Degrees needing two or three quarters of course work for certification.

Recruitment

An expanded program of teacher recruitment was initiated by The Ohio Recruitment Commission for Agricultural Education, including vocational agriculture teachers, College administration and department staff members, under the advisorship of Ralph Woodin.

This year, each beginning teacher was provided a kit of recruitment materials. A letter was sent to all agricultural teachers in January suggesting increased effort be given to recruitment of teachers. The topic "Careers in Teaching" was added to the FFA Extemporaneous Speaking Contest during the 1972 FFA Camp program.

Ten agricultural education majors participated in ten officer training meetings throughout the state by presenting a 20 minute narrated slide show relative to the need for teachers and jobs available in agricultural education. There were nearly 1,500 students in the total audience.

A special horticultural recruitment program to acquaint students in that department with opportunities in teaching vocational horticulture was conducted by Woodin, Boucher and James Utzinger,Extension Horticulturalist.

Recruitment exhibits were prepared and placed at The Ohio State Fair, Farm Science Review and the Ohio FFA Convention.

Twenty states having a surplus of agricultural teachers were contacted about opportunities in Ohio for teaching. Thirty-eight persons indicated an interest in teaching in Ohio.

Approximately 800 prospective students attended the two College career days. Vocational agriculture teachers supported the College activities by bringing students to campus for Career Day as well as Youth Science Day.

Recruitment receives high priority as a department activity. Nationally, 120 departments were closed last year due to a shortage of teachers. Woodin reported only 49% of the agricultural education majors in the United States are teaching compared to 60% in Ohio.

Student Financial Assistance

Students in agricultural education are eligible for the financial assistance made available to all students of The Ohio State University. However, there are three special funds for majors in the department: Agricultural Education Scholarships, Lester B. Harner Scholarships, and the Landmark Agricultural Education Scholarship which provides $300 to one student for one year.

Unfortunately, the Processed Limestone Association discontinued their scholarship of $400; however, during the year the Ohio Grain, Feed and Fertilizer Dealers established a scholarship for agricultural education majors which provides $500 to one student for one year.

In 1971-72 the following undergraduates received scholarships: Harner Scholarships: Tom Rosenbeck, St. Henry; Jeff Johnson, Bellevue; David Moulton, Ravenna; Mark Gebhart, Lewisburg; and Doyle Stevens, Norwalk; Landmark Scholarship: Don Breece, Delaware; Agricultural Education Scholarships: Ron DeLong, Van Wert; Roger Greenawalt, Beloit; and Russel Sword, Wellington.

Curriculum and Course Changes

Curriculum changes were made in the program for teacher certification in agriculture to meet the requirements for seven specialties.

Committees were appointed for these specialties and their curriculum proposals, after some revisions, were approved by the joint staff and the State Department of Certification. Occupational competence to the extent of one year of practical experience or six months of directed experience is required for certification. Since 85% of the students seeking certification in the specialty area "production" are farm reared, they have the necessary farm experience and so are not affected by the 1972 certification standards. However, with the other specialties more attention will need to be given in counseling students so that they are assured of having the prerequisite practical experience for certification. During 1972, a committee working with personnel in the Dean's Office began planning programs with students so that they could secure directed work experience including supervision with University credit.

The program for certification in production agriculture was not drastically changed from the years past except that economic entomology or plant pathology were added to the required list and Genetics 140 or 314 encouraged.

The curriculum for agri-business is in the process of revision due primarily to the changes being made in courses in agricultural economics such as the addition of management of small business and record keeping for agri-businesses that were previously secured from courses in the College of Administrative Science. Even though approval was also granted for the curriculum submitted in industrial equipment, agricultural resources, forestry and horticulture, it is very likely that during the coming year revisions are in order for these specialty areas.

Programmed instruction for both Agricultural Education 200 and 230 introduced in 1970-71 and carried on during the past year is being expanded for 1972-73. Micro-teaching utilizing the video-tape machine has been found most helpful in the courses 200 and 230. The machine is also being used extensively in other courses in agricultural education.

During the year Agricultural Education 380.01, 380.02, and 380.03 were lowered to the 200 level and have been approved as 280.01, 280.02, and 280.03. The staff is generally agreed that providing experience early in the undergraduate college career is important and are encouraging students between their freshman-sophomore year as well as between their sophomore-junior and junior-senior years to enroll in 280.01, 280.02, or 280.03. The courses 280.01 and 280.03 give particular emphasis to "September Experience" when high schools are in session and previous to the beginning of the Autumn Quarter at the University. Agricultural Education 230 was moved to 330 since its enrollment consists of juniors and seniors and so should not be on the sophomore and 200 level. Through special consideration of the Dean's Office, Agricultural Education 200 may be scheduled by third quarter freshmen.

The staff recognizes that undergraduate courses are designed to assist students to make a successful entry into teaching but that additional professional preparation is required beyond the Bachelor's Degree if they are to approach optimal proficiency in the field. Thus, it becomes necessary for a teacher to enroll in post-graduate work, hopefully in programs earning the Master's or Ph.D. Degrees. The incentives for graduate work including increases in salary make advanced degrees almost a necessity if a teacher is to continue in the profession. The staff encourages students to be prepared for entry into the Graduate School. Students whose undergraduate grade point hour is below 2.7 are asked to take the Graduate Record Examination so that they might qualify or otherwise learn what they need to do for admission to the Graduate School. During the year 25 graduates from the department were admitted to the Graduate School.

Departmental Field Experience Program

During the past year, 62 students were enrolled for student teaching. They received field experience in 29 cooperating centers in agricultural education and 24 county extension centers as reported in Tables 4 and 5. Twelve more cooperating centers were used for other field experience. Ten undergraduates completed field experience in employment positions, and 65 undergraduates were placed for field experience programs in Agricultural Education 380.01 and 380.03. Two students were placed for special field experience in Extension, Agricultural Education 380.02.

Continued in this year's program in many instances was the innovation of assigning a student teacher to a cooperating school and to an extension center in the same county. Coordination of learning experiences by the extension agent and the agriculture teacher provided the student teacher with timely and worthwhile activities throughout the quarter. Cooperating teachers' and agents' meetings were held at the beginning of the quarter rather than at the end. At these meetings the agents and teachers identified objectives for the quarter and discussed plans for cooperating the total experience program. Final evaluation of the student teacher by the cooperating agent and teacher was accomplished during a visit by University personnel.

Fifty student teachers were placed in 24 cooperating centers for extension experiences as a part of student teaching. Seminars were held to prepare the student teachers for the experiences in which they engaged during their extension field experience. Seminar topics were area extension programs, extension program development, work with

TABLE 4

COOPERATING SCHOOLS AND THE QUARTERS THEY HAD TRAINEES
IN STUDENT TEACHING AND OTHER FIELD EXPERIENCE

School	380.01	380.03	Student Teaching		
			Autumn	Winter	Spring
Adena		1			
Ansonia		1			
Big Walnut	2	2		2	1
Bluffton	1		1		
Buckeye Valley	1				2
Cardington-Lincoln	2		1		
Carrollton	1			1	
Clear Fork Valley			1		
Cloverleaf	1				
Clyde		1			
Eastland AVC	1		1		
Crestview	1		1		
Elgin	1				1
Fairfield Union	1			1	
Fredericktown	2		2		
Frontier			2	2	
Greene Co. AVC	1				
Greenville	1				
Hardin Northern					2
Jonathan Alder	1		1	2	1
Lincolnview			1		
Loudonville					2
Madison Plains	2		2		2
Marlington		1			
Marysville		1	1		2
Miami Trace					1
Muskingum Co. AVC					1
North Union	2			2	1
Northmor			1		
Northwestern Clark	1			1	1
Oak Harbor				1	
Perkins	1				
Ridgedale		1			
Southwest Licking	1	1			1
Spencerville	1		1		
Strongsville		1			
Tinora		1			1
Vanguard AVC		1			
Wayne Co. AVC	1	1			1
West Branch		1			
Westerville	4		1		3
Special Assignment	7		7	2	1
Other	7	7			
TOTAL	44	21	24	14	24

TABLE 5

STUDENT TEACHING COOPERATING COUNTIES
AND THE QUARTERS THEY HAD TRAINEES

County	380.02	Number of Trainees, Student Teaching		
		Autumn	Winter	Spring
Allen		2		
Ashland				2
Clark			1	
Columbiana			1	
Defiance				1
Erie				1
Franklin				2
Fairfield	1	2	1	2
Hancock				2
Hardin			2	
Knox		2		
Licking			2	1
Madison		2		2
Mahoning				1
Marion				1
Miami				1
Morrow		2		2
Ottawa			1	
Pickaway			2	1
Richland		1		
Trumbull	1			
Union		2		2
Van Wert		2		
Wayne				1
Washington		1	2	
TOTAL	2	16	12	22

agricultural related agencies, socio-economic aspects related to community educational programs, and relevant issues facing extension in the future.

Visitations by University personnel were made to each of the cooperating school and extension centers and consultations were held with student teachers and the cooperating instructor. Comments by student teachers indicated a very favorable reaction to the instructional

efforts provided by school and extension faculty serving as cooperating instructors. They regarded the extension experience as a part of their overall student teaching and one of the contributing factors to their understanding more about the community and the educational programs therein.

During seminars held concurrently with student teaching attention was given to concerns such as planning for instruction, providing for student occupational experience, the organization of youth leadership programs, organizing post-secondary education, techniques of instruction and the evaluation of teaching and student performance.

Through the continued use of new video equipment, it was possible to have closed circuit TV observation of teaching during a seminar. Student teachers were able to observe and discuss the teaching of a high school class by one of their group, without the intrusion upon the class.

While much benefit is gained from the seminars where student teachers meet and discuss common problems, there is growing need that the number of such meetings be reduced because of the wider placement of trainees to provide experience in the subject area in which they are certified to teach. Beginning, mid-term, and closing seminars may be continued so long as students are able to travel the required distance.

Student teachers were reimbursed ten cents per mile for travel to seminars and farm-home and occupational program visits. They received mileage from agricultural extension for activities during their assignment to a county office. Mileage per student teacher varies depending upon the distance the trainee travels to seminar locations. The placement of student teachers to teach in specialized programs increases the mileage used in attending seminars.

During the 1971-72 year, 50 student teachers drove a total of 15,108 miles in vocational agriculture. The cost was $1,510.80 with an average of $30.22 per trainee. A total of 9,342 miles were driven in extension activities at a cost of $934.20 and an average of $25.95 per trainee. This is approximately the same as it has been in previous years.

Agricultural Education Society

The undergraduate majors who are members of the Agricultural Education Society plan and conduct with their advisor, Willard Wolf, a program of activities to develop professional competence through experiences that are not generally provided in course work. The program emphasizes the development of competence in leadership by member participation in such roles whether in meetings of the society, committee

functions, or in cooperative undertakings with other students in the University and College.

Members engage in forums and symposiums, conduct social and educational meetings, plan presentations, prepare exhibits, and maintain a decorum and appearance befitting the profession.

The society meets regularly on the second and fourth Tuesdays of the month with meetings starting at 7:00 p.m. and ending about 8:30 p.m. Included is a business session, an educational program, and time for socializing and refreshments.

The society sponsors a steak fry, a faculty-student get together, a Christmas party with students at the Columbus State Institute (school for mentally retarded) during the Autumn Quarter; a banquet, exchange with an Agricultural Education Society (Vermont and Penn State in 1972) during the Winter Quarter; a recruitment luncheon, a lunchstand to feed 2,000 plus FFA members attending the State Judging Contests, and a leadership training weekend at Camp Muskingum during the Spring Quarter. This year instead of the usual recruitment luncheon, members made trips to the officer training meetings in each district and gave slide presentations and talks on recruitment.

The society members prepare a printed yearly program of activities including roster of officers, officer and faculty editorials, calendar of events, monthly activities, duties and responsibilities of officers, goals with ways and means for eight major activities, budget, and constitution. A scrapbook is maintained and kept in the departmental reception room. The society prepares a quarterly publication "The Townshend Educator" featuring major articles associated with the profession, current issues and problems, timely announcements, reports of society activities, and personal items.

Conflicts with class sessions, work schedules, and other curricular and extra-curricular activities affect member participation in the program of the society. However, compared with other departmental organizations, the AES is recognized as doing well. The attendance at the regular meetings this past year ranged from 20 to 100. The banquet and steak fry each attracted in excess of 200 including 100 members. The bi-monthly executive meetings held on the first and third Tuesday of each month usually have 15 or more in attendance.

Students in agricultural education regard the activities of the society as worthwhile. They conduct their activities in a professional manner. Their performance and participation indicate their regard for this part of their professional pre-service education.

This year, for the first time, girls were permitted to become members of the society.

Placement

A total of 64 students were certified to teach vocational agriculture. Of this number, 51 were regularly qualified with the remainder being graduates of other departments or returning for special training. Of the 64 certified, 40 were placed as teachers of vocational agriculture, 1 in Extension, and 3 continued in their educational pursuits through the Graduate School. As may be noted in Table 6, 20 were classified in other related fields in education and agriculture or inducted into the service.

TABLE 6

NUMBER OF GRADUATES TRAINED AND PLACED
IN VARIOUS OCCUPATIONS FOR A SELECT NUMBER OF YEARS

Year	Number of Men Trained	Number Placed		Graduate School	Other, Inc. Armed Services
		Vocational Agriculture	Extension		
1971-72	64	40	1	3	20
1970-71	72	41	3	2	26
1969-70	72	39	3	4	26
1968-69	71	45	2	4	20
1967-68	56	37	0	4	15
1966-67	58	35	5	4	14
1965-66	56	36	1	3	16
1964-65	40	33	1	2	5
1963-64	37	24	1	1	8
1962-63	34	21	2	2	9
1961-62	44	22	3	5	14
1960-61	54	24	11	4	15
1959-60	46	20	6	2	18
1958-59	69	35	4	10	20
1957-58	55	30	9	4	12
1956-57	54	25	4	5	20
1955-56	42	32	5	2	3
1954-55	29	20	1	0	8
1953-54	29	15	3	1	10
1952-53	32	18	2	3	9
1951-52	46	35	2	2	7

Graduate Program

A total of 265 students participated in the programs beyond the Bachelor's Degree provided by the Department of Agricultural Education.

Many of these students were pursuing the Master's Degree. As observed in Table 7 the group was comprised of 155 teachers of agriculture, 34 Extension persons and 76 others. Students from 12 states and Taiwan were enrolled in the graduate program in addition to those from Ohio. The enrollment data as reported by the Graduate School for the four quarters are reported in Table 8.

TABLE 7

ENROLLMENT OF OHIO TEACHERS OF VOCATIONAL AGRICULTURE AND OTHERS MAJORING IN AGRICULTURAL EDUCATION IN PROGRAMS BEYOND THE B.SC. DEGREE

	Enrollment			
Year	Ohio Teachers	Extension Personnel	Others	Total
1971-72	155	34	76	265
1970-71	126	41	68	235
1969-70	104	24	55	183
1968-69	89	18	63	170
1967-68	78	28	53	159
1966-67	92	14	49	155
1965-66	99	29	38	166
1964-65	101	28	36	165
1963-64	107	34	40	181
1962-63	91	38	39	168
1961-62	96	37	36	169
1960-61	102	40	28	170
1959-60	101	45	26	172
1958-59	100	0	88	188
1957-58	102	0	70	172
1956-57	101	0	34	135
1955-56	121	0	27	148
1954-55	93	0	34	127
1953-54	114	0	27	141
1952-53	93	0	27	120
1951-52	80	0	29	109
1950-51	76	0	36	106
1949-50	88	0	14	102
1948-49	76	0	16	92
1947-48	58	0	11	69

TABLE 8

GRADUATE SCHOOL ENROLLMENT IN AGRICULTURAL EDUCATION
AS REPORTED BY GRADUATE SCHOOL

Quarter	Masters	Ph.D.*	Total
Summer, 1971	74	37	111
Autumn, 1971	29	26	55
Winter, 1972	35	29	64
Spring, 1972	54	29	83

*Board of Regents Classification: the rank is Ph.D. if the student holds a Master's Degree or has earned more than 50 hours of graduate credit.

During the year 30 Master's Degrees and 17 Ph.D. Degrees were awarded. Compared to last year, this represents a significant increase in the Master's Degree program; however, there were two less than the record number of Ph.D.'s in the year previous.

Departmental offerings on campus included Agricultural Education 622, 641, 795.01, 795.03, 795.05, 810 and 811 in the Autumn Quarter. During the Winter Quarter the graduate offerings included Agricultural Education 631, 794, 795.06, 823 and 885. Spring Quarter courses were 640, 641, 642, 770, 795.03 and 886. During each quarter special problems and research were available. Separate sections in 811 and 823 were conducted for extension personnel.

The off-c mpus offerings during the year for teachers included Agricultural Education 744, Practicum in Teaching Farm Business Planning; Agricultural Education 622, Continuing Education in Agriculture; Agricultural Education 642, Youth Organizations; Agricultural Education 743, Practicum in Teaching Agricultural Mechanics; and Agricultural Education 640, Instructional Media in Teaching Agriculture. The courses in adult education, occupational experience and youth organizations were extended beyond the quarter. For example, adult education and occupational experience courses were started during the autumn quarter but were not completed until early in the spring quarter. This was done to accommodate the teacher of agriculture in not having so many meetings concentrated within a quarter. Also it was able to adapt the course offerings more nearly to the developments in the department.

Agricultural Education 795.03, Leadership Development, was conducted for extension agents and teachers in the Washington Court House area

during the Autumn Quarter. Another special program for 30 extension agents was available for a three week period in September. The course offerings included Agricultural Education 795.06, Communications and Agricultural Education 794, Camp Program Development.

A total of 176 teachers of vocational agriculture participated in this year's courses and workshops which were conducted during the last three weeks in June. Areas of special courses included agronomy - crop production, animal breeding and genetics, agricultural mechanics, pollution control, and environmental studies. Agricultural education offerings were teaching materials, methods, curriculum planning, research methods, farm business planning and analysis, agricultural business and supplies and horticulture. Four intern programs for agribusiness, agricultural equipment, agricultural resources and horticulture were provided.

Dr. Charles Drawbaugh, Chairman of the Department of Vocational Education at Rutgers University was the graduate lecturer during the spring quarter. He spoke to approximately 50 graduate students and faculty concerning "Adapting of the Program of Vocational Agriculture to an Industrial State."

A number of brown bagger luncheons for graduate students and faculty were planned by the graduate students. These luncheons were informal in nature and featured for the most part a particular state or country reported by a graduate student. Also there were some brown baggers of graduate students with their advisor. A reception for all graduate students and wives was again held during the early part of the autumn quarter.

Research

A new course on Analysis and Interpretation of Data (Agricultural Education 887) was developed and approved. The course which resulted from a graduate seminar offered the past two years will be offered for the first time during the autumn quarter, 1972. The course is designed for Ph.D. candidates wh have completed at least one year of graduate study, including at least one course in statistics. The course deals with the application and interpretation of statistical techniques, including the use of the computer, to research in vocational-technical and extension education. Warmbrod and Cunningham will teach the course.

The study of currently enrolled students and graduates of post-secondary technical agriculture programs in Ohio was continued during the year. This OARDC funded project is directed by Bender; James Cummins is the graduate research associate assigned to the project. The following report of the project was issued during the year:

Cummins, James E. and Ralph E. Bender. "Agricultural Technician Education in Ohio -- 1970-71." April 1972.

The research phase of the project on "Development and Dissemination of Courses of Study and Instructional Materials for Environmental Science and Protection Programs" was completed during 1971-72. Ridenour directs the project which is funded by the Ohio Department of Education. Warmbrod was the consultant for the research phase of the project which was designed to identify and estimate manpower needs in environmental protection occupations and to determine the competencies required for entry into these occupations. Graduate research associates completing the research phase of the project were John Hillison, David Howell, and William Farrington. The research phase of the project is reported in the following publications:

William S. Farrington and J. Robert Warmbrod. "Manpower Needs in Environmental Management Occupations in Industrial Firms in Ohio." June 1972.

John H. Hillison and J. Robert Warmbrod. "Manpower Needs in Environmental Management." July 1972.

The research project "The Influence of Instruction in Agriculture in Grades 9 and 10 on Students' Subsequent Educational and Occupational Performance" was begun during 1971-72. The project is staffed by a graduate research associate position supported by funds allocated to the Department by the Agricultural Education Service, Ohio Department of Education. Arthur Neavill is the research associate assigned to the project; Warmbrod directs the project. The first year of the project was devoted to the development of instruments and techniques for conducting a criterion-referenced assessment of ninth- and tenth-grade instructional programs in agriculture. Another graduate research associate position supported by funds allocated to the Department by the Agricultural Education Service of the Ohio Department of Education was used to staff the project on "Follow-Up of Graduates of Vocational Horticulture Programs in Ohio." Kenneth Parker is the research associate assigned to the project. Woodin directed the project.

During 1971-72, the following publications, in addition to those listed previously, were issued in the Department's "Research Series in Agricultural Education."

Iverson, Maynard J. and Ralph E. Bender. "Guidelines for the Development of Student Organizations Associated with Agricultural Programs at Two-Year, Post-Secondary Educational Institutions in the United States." August 1971.

Miller, James R. and Robert W. McCormick. "A Theoretical Model to Improve the Extension Education Outreach of The Ohio State University; Utilizing Marketing, Behavioral, Business, Management, and Systems Concepts." January 1972.

Noland, Warren G. and Ralph J. Woodin. "Migration Patterns of Vocational Agriculture Graduates in Ohio." July 1971.

Steele, Doris H. and Clarence J. Cunningham. "Opinion Leadership in Family Living Among Low Income Homemakers in the Expanded Nutrition Program in Ohio." April 1972.

Welton, Richard F. and Ralph E. Bender. "Relationship of Student Characteristics and Program Policies to Participation in FFA." July 1971.

Guiler, Warmbrod, Wilson, and Woodin and several graduate students attended the Central Region Research Conference in Agricultural Education held at Purdue University, August 1971. Warmbrod attended an American Educational Research Association Training Session on "Applied Linear Regression Analysis in Educational Research" held at the University of Chicago, April 1972. During 1971-72 Warmbrod served as Chairman of the Special Interest Group on Vocational-Technical Education of the American Educational Research Association.

The Department's 1973-75 and 1975-77 Biennial Plans developed during the year include a program improvement project titled "Agricultural Education Research and Development Program." The major goals of the proposed program improvement are (a) the establishment of a research program in agricultural education (vocational-technical and extension education) that is supported by College and Ohio Agricultural Research and Development Center funds, (b) the establishment of a Department of Agricultural Education in the Ohio Agricultural Research and Development Center, and (c) the further improvement of the graduate program in research methodology offered by the Department. The proposal requests additional faculty and graduate research associate positions for persons who will plan and conduct research, prepare proposals for research to be funded from sources outside the University, and direct research conducted by M.S. and Ph.D. candidates.

Faculty members directed 17 Ph.D. dissertations and 2 M.S. theses which were completed in 1971-72. Faculty members are currently supervising 28 Ph.D. dissertations that are in progress.

Studies Completed

Ph.D. Dissertations

Adams, Richard N. "Continuing Education for Technical College Students." (Bender)

Byers, Charles W. "The Relationship of Selected Variables to the Supervision Provided Students of Vocational Agriculture by Their Teachers." (Bender)

Hillison, John H. "Manpower Needs in Environmental Management." (Warmbrod)

Hutchings, Ronald P. "The Influence of Excessive Fat Prior to Weaning on the Milking Potential of Beef Heifers." (Bender)

Kunzru, Omkar N. "Role of the Area Extension Agents in Program Development as Perceived by Selected Extension Personnel." (Cunningham)

Lumpkin, Oliver R. "Characteristics of Disadvantaged Rural Youth in Southern Secondary Schools." (Bender)

Miller, James R. "A Theoretical Model to Improve the Extension Education Outreach of The Ohio State University; Utilizing Marketing, Behavioral, Business, Management, and Systems Concepts." (McCormick)

Parkhurst, Carmen R. "The Information Sources and Educational Needs of Commercial Poultrymen in Ohio." (Cunningham)

Rapp, Gene E. "Perceptions of the Role of an Agricultural Technician." (Bender)

Rathore, Omkar S. "Adoption of Extension Innovations Among Selected Personnel in the Ohio Cooperative Extension Service." (Cunningham)

Reeves, Wade H. "Church-Related Programs in Agricultural Education in Cameroun and Uganda, Africa." (Bender)

Reid, Richard A. "Guidelines for Evaluation Activities Conducted by State Advisory Councils for Vocational and Technical Education." (Woodin)

Russell, Earl B. "Development of an Instrument to Measure the Change Orientation of Vocational Teachers." (Warmbrod)

Soobitsky, Joel R. "Perceived Training Needs of Urban Cooperative Extension Agents Working with Disadvantaged Audiences." (Cunningham)

Steele, Doris H. "Opinion Leadership in Family Living Among Low Income Homemakers in the Expanded Nutrition Program in Ohio." (Cunningham)

Vice, Billy J. "Variables Related to Continuing Agricultural Education in Kentucky Schools." (Bender)

Zurbrick, Phillip R. "Effectiveness of a Teacher Reference Utilizing an Inductive Mode and Principles Approach with High School Vocational Agriculture Students." (Bender)

M.S. Theses

Rohrer, John. "Factors Related to Regional Planning Commission Activity." (Cunningham)

Sherer, George. "Producers Educational Needs in Marketing of Feeder Calves in Selected Eastern Ohio Counties." (Cunningham)

Research Completed by Staff (Not Previously Listed)

Bender, Ralph E. "The 1971 Occupations of Recent Graduates of Vocational Agriculture in Ohio." September 1971.

Jenkins, David D. "Inventory of Professional In-Service Training Needs, Ohio Cooperative Extension Service."

Woodin, Ralph J. "Supply and Demand for Teachers of Vocational Agriculture in 1971." December 1971.

Young, Richard E. "Evaluation Report--Agronomy Workshop, Ohio Cooperative Extension Workshop." November 1971.

Young, Richard E. "Evaluation Report--Farm Management Workshop, Ohio Cooperative Extension Serivce." October 1971.

Young, Richard E. "Evaluation Analysis--1972 Pesticide Up-Date Workshops, Ohio Cooperative Extension Service."

Young, Richard E., Cunningham, C. J., and Moore, P. B. "Area Staffing Pattern Study, Annotated Bibliography." January 1972.

Honors Students' Individual Studies

Pickering, Ervin Roger. "Land Laboratories in Ohio." (Wolf)

Rosenbeck, Thomas J. "Leadership Activities and Traits of High School Vocational Agriculture Students." (Wolf)

Studies in Progress

Ph.D. Dissertations

Beasley, Gary. "An Assessment of an Instructional Unit for Preparing Users of the Educational Resources Information Center (ERIC) System." (Taylor)

Bloss, Norman F. "The Relationship Between Enrollment in Agricultural Education and the Vocational Maturity of Secondary School Students." (Warmbrod)

Breedlove, Frank. "Performance Objectives of Agricultural Mechanics Programs in Joint Vocational Schools." (Wilson)

Cobb, Nimrod. "In-Service Education Activities of Teachers of Vocational Agriculture in Alabama." (Woodin)

Cummins, James E. "A Follow-up of Agricultural Technician Education Graduates and Non-graduates in Ohio--1965-68." (Bender)

Farrington, William S. "The Relationship of Professional Preparation of Technical Agriculture Teachers to Students' Success." (Warmbrod)

Foreman, Ronald. "The Effectiveness of the Early Placement Program with Respect to Transition from School to Work." (Bender)

Howell, David. "Effectiveness of a Student Reference in Changing Attitudes of High School Students Toward the Protection of the Environment." (Warmbrod)

Kowalka, Ronald C. "Evaluation of the Career Education Program in the Mansfield, Ohio, Public Schools." (Wilson)

Lindamood, John. "Continuing Education Programs for the Dairy Food Industry." (McCormick)

McCutcheon, J. Randall. "An Assessment of Factors Related to a Diffusion Strategy for Simulation Training Materials." (Taylor)

Miller, Raymond A. "An Evaluation of the Living Learning Program for Undergraduates in Agriculture and Natural Resources at The Ohio State University." (Bender)

Moore, Philip B. "Staffing Patterns in Extension Today: The Role of the Area Versus the Traditional County Agent." (Cunningham)

Morgan, John P. "Benefits and Costs of an Adult Education Program for Farmers." (Warmbrod)

Myers, Donald. "The Effectiveness of Traditional Lecture and Tele-lecture in Teaching Adults." (McCormick)

Neavill, Arthur T. "Assessment of Competencies of Eleventh and Twelfth Grade Students in Agricultural Mechanics." (Warmbrod)

Newcomb, L. H. "The Effect of Contract Grading on Student Performance." (Warmbrod)

Parker, Kenneth A. "Adapting the FFA to the Educational Needs of Urban Youth Enrolled in Vocational Agriculture." (Warmbrod)

Pittman, Joe. "The Application of Motivational Theory to Extension Personnel." (Cunningham)

Roediger, Roger D. "The Relative Effectiveness of the Aural and Written Individualized Instruction with Students of Different Reading Levels." (Warmbrod)

Sanders, Emerson. "Volunteer 4-H Leaders Working with Youth with Limited Resources." (Cunningham)

Shane, James A. "The Relationship Between Administrative Organizational Structure and Curriculum Comprehensiveness of Community Colleges." (Wilson)

Shannon, Theodore P. "The Effectiveness of the Use of Simulation Materials in Vocational Education Programs for Youth with Special Needs." (Wilson)

Sponaugle, Adam J. "Attitudes of Guidance Counselors Regarding Vocational Education." (Warmbrod)

Stanley, Norman M. "Factors Related to Vocational Agriculture Students' Decisions Concerning Post-Secondary Education." (Bender)

Thaxton, Louis C. "Youth with Special Needs in Metropolitan Ohio Schools." (Wilson)

Wotowiec, Peter. "In-Service Education Needs of Ohio Teachers of Vocational Horticulture." (Woodin)

Yoder, Edgar P. "Self-Concept of Vocational Education Students." (Bender)

<u>Staff Research</u>

Bender, Ralph E. "The 1972 Occupations of Recent Graduates of Vocational Agriculture in Ohio."

Bender, Ralph E. and Cummins, James E. "Agricultural Technician Education in Ohio."

Boucher, Leon and Starling, John T. "Identifying Performance Capabilities Necessary for Students in Production Agriculture."

Cunningham, Clarence J. "Validation of Personnel Selection Instruments in the Cooperative Extension Service."

Warmbrod, J. Robert and Neavill, Arthur T. "The Influence of Instruction in Agriculture in Grades 9 and 10 on Students' Subsequent Educational and Occupational Performance."

Young, Richard E. "Professional Improvement Opportunities for State Level Extension Professionals in Fifteen States."

Young, Richard E., Cunningham, C. J., and Moore, P. B. "National Extension Study to Compare Area with Traditional Staffing Patterns."

In-Service Education Program for New Teachers

An in-service educational program for 83 new teachers of vocational agriculture was coordinated by the teacher education department in cooperation with the state supervisors of vocational agriculture. The purpose of the program was to further develop the competencies needed by teachers to plan, conduct, and evaluate their total program of vocational agriculture in local communities.

The program consisted of over 70 clock hours of workshops, small group seminars, and individual consultation which was planned and conducted by Guiler, Starling and the district supervisors. An orientation program was held at the annual teachers conference. A five day workshop was conducted at the FFA Camp Muskingum on the module system to which the teachers were assigned to sessions concerning their needs. The time was largely devoted to curriculum planning, classroom teaching techniques, reports, policies, procedures, evaluation and teacher responsibilities. Every teacher had the opportunity of giving a demonstration of classroom teaching on video tape and having it evaluated by other teachers.

A three-day seminar was conducted December 27, 28, and 29 for all new teachers at The Ohio State University in the Agricultural Administration Auditorium. The purpose of this workshop was to evaluate progress, improve plans for curriculum, identify problems, and share experiences by taxonomy areas with assistance from the state supervisors of agricultural education. In addition, each new teacher was observed during the school year by teacher educators and assistant supervisors or the local supervisor in the joint vocational school.

Vocational agriculture is becoming more diversified as indicated by the number of new teachers employed in specialized areas reported in Table 9.

There were 51 teachers who were trained in Ohio along with three from a state other than Ohio employed before the school doors opened in September. Twenty-one teachers were employed from industry to fill the vacancies in several specialized areas of teaching such as horticulture, agricultural equipment and mechanics, and agricultural business. Eight student teachers graduating at the end of the autumn quarter 1971 were

on special placement (temporary certificate) due to the shortage of personnel.

A role perception-expectation study initiated in 1965 by Guiler was continued through 1971-72 with all new and returning teachers helping the Department of Agricultural Education assess the relative effectiveness of the internship program afforded teachers during their first year of employment.

A brief outline of the program is as follows:

DATE	ACTIVITY AND PURPOSE	LOCATION
July 12-13-14	Introduction of new teachers to Annual Teacher's Conference and review of In-service program	Scot's Inn, 4800 Sinclair Road, Columbus, Ohio
August 16-20	Five day workshop for all new teachers certified and non-certified - Curriculum Planning	Camp Muskingum Leesville Lake
September	1/2 Day Seminar for all new teachers - classroom management	Small group meetings in schools by geographical areas
October	Individual school visits - Occup. Exp., Classroom and shop problems	In local schools
November	1/2 Day Seminar-Teaching Methods Classroom Problems Occupational Experiences	Small group meetings in schools by geographical areas
December 27-28-29	Three Day Workshop Curriculum Adjustments and Problems concerning the total program for all taxonomies	Agr. Adm. Bldg. Aud. O.S.U.
January	Individual Visits - Agricultural Mechanics - Youth Organization	In local schools
February	1/2 Day Seminar Agricultural Mechanics	Small group meetings in area schools
March	Individual teacher visits Teaching Methods and Individual Improving Programs	In local schools
April	Individual Teacher visits Inventories - Individual Evaluation	In local schools
May	1/2 Day Seminar-Year End Closing School Year-Evaluation Outline for Summer	Small group meetings in area schools
May	Evaluation and Summary of New Teacher Program	

In addition to these activities the teachers were encouraged to participate in off-campus courses as indicated in the graduate education section of this report.

TABLE 9

NUMBER OF NEW AND RETURNING OHIO TEACHERS
AS SHOWN BY AREA OF SPECIALIZATION DURING PAST THREE YEARS
1969-72

Area of Specialization	Number of New Teachers 1969-70	1970-71	1971-72
Production Agriculture 0100	45	47	48
Agricultural Business and Supplies 0200	2	3	7
Agricultural-Industrial Equipment and Service 0300	6	7	8
Ornamental Horticulture 0500	15	12	10
Farm Business Planning and Analysis 9900	3	0	3
Agricultural Resources and Environmental Science	0	3	5
Agricultural Work Experience (AWE) 9900	12	3	2
TOTAL	84	75	83

An evaluation of new and returning teachers of vocational agriculture was made by school administrators at mid-year and at the end of the school year. These data were used for basis of individual teacher counseling and to further enhance the total in-service education program.

In-Service Education for All Teachers of Vocational Agriculture

The in-service education program which is a cooperative effort between the supervisory staff, State Department of Education, and the teacher education staff was designed to further develop competency in teaching vocational agriculture. This program during the past year was coordinated by Welch Barnett and Gilbert Guiler.

A total of 332 teachers participated in 14 non-credit, in-service workshops held throughout the state. These programs were planned and conducted primarily by resource personnel under the guidance of Welch Barnett and other supervisors.

Summer Workshops
Non-Credit, In-Service
July 1, 1971 - June 30, 1972

Title	Attendance	Dates	Location
Developing Leisure Resources	26	July 19-21, 1971	Tri-County JVS
Estate Planning	39	July 20, 1971	Wayne County JVS
Land Appraisal	21	July 20-21, 1971	Otsego H.S.
Farm Appraisal	41	July 21-22, 1971	Wayne County JVS
Economics in the Use of Farm Power and Equipment	10	July 26-27, 1971	Allen East H.S.
Livestock Breeding	20	July 27-30, 1971	Wilmington H.S.
Forage Management	28	July 27-28, 1971	Marietta
Money Management	24	July 29-30, 1971	Four County JVS
Landscaping	21	August 3-6, 1971	Cleveland
Methods of Teaching Farm Mechanics	40	August 4-6, 1971	Patrick Henry H.S.
Money Management	14	August 5, 1971	Wilmington H.S.
Land Appraisal	21	August 5-6, 1971	Wilmington H.S.
Farm Business Planning and Analysis	15	August 10-11, 1971	Union Local H.S.
Estate Planning	12	August 17, 1971	Wilmington H.S.

During the period June 12-30, 1972 there were 179 teachers enrolled in 16 different professional courses, technical courses, and workshops as follows:

Course Number	Course Title	Enrollment	Instructor
Ag Ed 621	Curriculum Planning	38	Guiler
Ag Ed 631	Methods of Teaching	67	Bender & Wilson
Ag Ed 640	Teaching Materials	20	Boucher
Ag Ed 684.40	Ag. Bus. & Service Interns	4	Wolf & Watkins
Ag Ed 684.40	Ag. Equip. & Mech. Interns	8	Hummel & Johnson
Ag Ed 684.40	Ag. Res. Consrtvn. Interns	2	Barnett & Guiler
Ag Ed 684.40	Horticulture Interns	11	Davis & Newcomb
Ag Ed 790.12	Ag. Business & Supplies	23	Wolf & Watkins
Ag Ed 790.15	Horticulture (1st year)	17	Newcomb

Course Number	Course Title	Enrollment	Instructor
Ag Ed 790.23	Continuing Education FBPA	21	Starling
Ag Ed 885	Research Methods	17	Warmbrod
Ag Eng 550	Pollution Control & Waste Utilization	8	White
Ag Eng 594	Ag. Mech. (Constr. & Maint.)	13	Johnson
Agron 594	Crop Production	31	Herr
An Sc 594	Animal Breeding & Genetics	14	Cline
Nat Res 694.02	Environmental Studies	12	Townshend

International Education

The Department is represented on the International Agricultural Advisory Committee for the College of Agriculture and Home Economics, Ohio Agricultural Research and Development Center and the Ohio Cooperative Extension Service by Leon W. Boucher. Committee action supported the College Peace Corps for Tunisia Seminar, student study abroad and scheduled seminars in cooperation with various academic units.

The Department helped recruit students and young farmers for the Peace Corps Intern program for Tunisia. Regular Peace Corps personnel were recruited from the vocational agricultural teachers ranks. Mr. and Mrs. Dan Humphrey will be on contract in Sierra Leone Africa for two years. Dan taught at Patrick Henry High School.

Barry Glaz,a junior in agricultural education completed a year's study at Punjab Agricultural University at Ludhiana, India and returned to Ohio State University in May, 1972. This was in cooperation with the student exchange program between our College of Agriculture and the Punjab Agricultural University in India. A program of studies was identified and approved by both institutions before the student left for foreign study. All credits are accepted by the home institution permitting the student to graduate according to his normal schedule.

Omkar Nath Kunzru of India received his Ph.D. degree in agricultural education. His dissertation related to "Role of the Area Extension Agents in Program Development as Perceived by Selected Extension Personnel." Omkar Singh Rathore of Pakistan received his Ph.D. in agricultural education with a dissertation topic "Adoption of Extension Innovations Among Selected Personnel in the Ohio Cooperative Extension Service."

Six other foreign nationals continued educational programs in the department. They were: Sumita Roy, Rajeswari Venkatraman, Kwado Opare and Jabar Singh of India; Ted Lee of Korea; and Nasrullah Hashemi of Afghanastan.

Arthur Deisher, an agricultural education major, participated in the International Farm Youth Exchange Program by living with participating families in England. Several of the agricultural education graduates are serving in Peace Corps positions in Viet Nam, India, South America, Africa, Samoa, and British Guiana.

The Department cooperates with the International Affairs Office of the College in hosting visitors from foreign countries. Visits to secondary schools and area vocational schools are arranged upon request and need of the foreign participants.

Curriculum Materials Service

The Ohio Agricultural Education Curriculum Materials Service is a cooperative activity sponsored by the Agricultural Education Service, State Department of Education, and the Department of Agricultural Education. The purpose of the Service is the improvement of instruction in local agricultural education programs. The activities of the Service are under the direction of Harlan E. Ridenour.

An advisory group composed of local agricultural education teachers and representatives of the supervisory and teacher education staffs served to assist the Service in establishing priorities for developmental projects. When needed, special advisory groups in specific program areas, composed of experienced teachers, staff members, and representatives from industry and government, are assembled to assist the Service with specific developmental projects.

The Curriculum Materials Service assists in the identification of instructional materials needs. A search from all known available sources is then made to identify available materials. Such materials are evaluated by the Service with the assistance of selected teachers and program area specialists. These available materials suitable for use in Ohio programs are then cataloged and made available to Ohio teachers through the Curriculum Materials Service. A total of 583 such items were made available to Ohio teachers. An additional 90 items, available from commercial sources, were listed which teachers could order directly from the source.

In those areas in which suitable instructional materials are not available, the Curriculum Materials Service prepares those items which support the curricula of Ohio teachers. The 1972 catalog lists 129 such items.

The materials published by the Ohio Agricultural Education Service during the 1971-72 fiscal year were as follows:

Manuals

Trees for Landscaping, Identification, Culture, Use (Revision)
Shrubs for Landscaping, Identification, Culture, Use (Revision)
Some Common Types of Insects
Membership - The Pathway to Leadership
Introduction to Environmental Protection
Money Management
Vocational Horticulture Record
The Garden Center Worker
Trends in Agriculture. A publication for each of the 88 Ohio counties based upon census data.
Ups and Downs - The Basic Principles of Ladder Safety
Ladder Safety Test
Curriculum for Agricultural Education (22" x 22" chart)
Agricultural Education Student Progress (17" x 28" chart)
Opportunities in Agricultural Occupations (Student Manual)
Opportunities in Agricultural Occupations (Teacher's Guide)
Human Relations in Business (Student Manual)
Human Relations in Business (Teacher's Guide)
Advertising and Promotion (Student Manual)
Advertising and Promotion (Teacher's Guide)
Marketing Agricultural Products (Student Manual)
Marketing Agricultural Products (Teacher's Guide)
Business Money Management (Student Manual)
Business Money Management (Teacher's Guide)
Selling and Salesmanship (Student Manual)
Selling and Salesmanship (Teacher's Guide)
Business Procedures and Records (Student Manual)
Business Procedures and Records (Teacher's Guide)
Keeping Your Records Straight (AWE 5)
Budgeting and Spending (AWE 6)
Getting Started on Your Job (AWE 7)
Taking Care of Yourself (AWE 8)
Instructional Units on Agricultural Marketing
A Teacher's Guide to Farm Money Management
Farm Records - A Management Tool
Farm Accounting Problem (Student Manual)
Farm Accounting Problem (Teacher's Manual)
Agricultural Chemicals (Major Revision)
Conservation Aide
I. Soil and Water Conservation
II. Defining Soils and Watersheds
III. What Are the Responsibilities of a Soil and Water District Employee
IV. Surveying
V. Engineering Conservation Structure and Practices

Slide Series

Tillage Systems for Corn (70 color slides)
Poinsettia (43 color slides)
Soil and Its Properties (65 color slides)
Shrubs for Landscaping

Transparencies

Interpretation of Farm Business Analysis

Materials Currently Under Development

Occupational Opportunities in Environmental Management
Curriculum Guide and Instructional Materials for Environmental Protection Occupations
Electrification Unit
AWE 9 - Insurance
AWE 10 - Holding Your Job
Insect, Tick, and Mite Pests of Livestock and Pets (Under final editing)
Insect Pests of Field Crops and Stored Grains
Pesticides
Feeds (Major Revision)
Viburnum - Color slide series (final stages)
Series of approximately eight manuals dealing with the cooperative way of doing business. (Five manuals in 1st and 2nd draft stage)
Turf Management (Final editing and layup)
Some Identifying Characteristics of Seeds Common in Midwest (Major Revision)
Fork Lift Safety
Safety with Jacks and Hoists
Seed Production of Corn, Soybeans, and Small Grain - Color slide series (Now being printed)
The Inside Story of Madam Brood Sow - color slide series (Now being printed)
Flowering Shrubs - Color slide series (Now being printed)
Trees for Landscaping - Color slide series (Under development)
Business Procedures for a Landscape Service Organization (Final printing)
Balers

Materials from a variety of sources were distributed through the Curriculum Materials Service --

Film and Video Tape Catalog -- Cooperative Extension Service
Ohio Agricultural Education News -- Department of Agricultural Education
Soil Conservation District News -- SCS
Ohio Herd Development Observer -- Department of Dairy Science, The Ohio State University

The Ohio Future Farmer -- Ohio FFA Association
Ohio Young Farmer -- Young Farmer Association

The Curriculum Materials Service is a member of the American Association for Vocational Instructional Materials. The Director for the Ohio Service serves as a member and Vice President for the American Association Board of Directors. As a result of the participation, a total of 21 publications, four film strips, nine color slide series, and six transparency sets are available to Ohio teachers through the Ohio Service. The Service issues three catalogs as follows:

Ohio Curriculum Materials -- Listing materials developed and produced by the Ohio Service

Curriculum Materials -- Which lists materials which are purchased from other sources for resale to Ohio teachers.

AAVIM Teaching Aids -- Which lists the materials produced by the American Association for Vocational Instructional Materials.

Materials developed and produced by the Ohio Agricultural Education Curriculum Materials Service have been distributed to schools, farmers, and industry on a national basis.

Special Grants

A research and development project to identify environmental protection occupations was completed as of July 1, 1972. Occupations in the area of environmental protection were identified. Those appropriate for inclusion in vocational education programs were selected. Task analysis was conducted on the selected occupations. The follow-up stage will be the development of curriculum and supporting instructional materials.($34,900.00)

Career Education in Agribusiness, Natural Resources and Environmental Improvement. A United States Office of Education project to develop curriculum guides in the following areas:

K - 6th grade	Awareness
7 - 8th grade	Orientation
9 - 12th grade	Exploration
11 - 12th grade	Preparation

Roger D. Roediger is Director of the Project which runs from June 15, 1972 to June 15, 1974. ($260,000.00)

Martha Holden Jennings and Ohio Farmer Cooperative Project. A project funded by the Foundation, the Ohio Council of Farmer Cooperatives, and the Ohio Agricultural Education Curriculum Materials Service. Materials are

being developed which deal with the cooperative way of doing business. Separate units are being planned for rural and urban students. Dr. J. H. Lintner is developing the materials. ($20,000.00)

Ohio Farm and Home Electrification Council is funding the development of materials for farm and home electrification. Roger D. Roediger is coordinating the project. ($1500.00)

Farm Business Planning and Analysis

Approximately 750 farm operators received instruction in Farm Business Planning and Analysis through programs conducted by Ohio teachers of vocational agriculture during the past year. This instruction was provided by ten full-time and four part-time adult instructors as well as 43 regular high school teachers who provided instruction for 4 to 6 couples beyond the contractual day.

A summary of farms which was submitted for computer analysis showed an average capital investment of $100,000 per farm so this instructional program had an influence on farm business investments of over $74 million.

In-service training in Farm Business Planning and Analysis and related areas was provided by John Starling in cooperation with staff members in the Department of Agricultural Economics and the Cooperative Extension Service. This training included: (1) an off-campus class held during the Autumn Quarter at the Lima Campus of The Ohio State University in which sixteen teachers and one banker were enrolled; (2) a summer workshop which was conducted on a half-day basis for a period of 12 days in which 18 teachers were enrolled; (3) a two day non-credit seminar held in Belmont County in which fourteen eastern Ohio teachers and two county agents from Switzerland participated; and (4) small group meetings held at various locations throughout Ohio which were attended by 67 different teachers.

In addition to in-service training for teachers of vocational agriculture a series of 15 two-hour sessions was conducted during the Winter Quarter for 17 branch managers of the National City Bank in Marion County.

The following instructional materials were prepared for teacher use:

"Farm Records a Management Tool," 85 pages;
"Farm Money Management," 68 pages; and
"Unit Budgets for Major Livestock and Crop Enterprises," 60 pages.

Certification for Local Supervisory Positions

During the year the department cooperated with the Division of Vocational Education of the State Department in proposing a program to certify teachers and others interested in becoming local supervisors of vocational agriculture. According to the state standards, it is necessary for a person to have 27 months of successful experience in vocational agriculture and the completion of at least 15 quarter hours beyond the Bachelor's degree. The 15 quarter hours were identified as follows:

Six hours of required courses:

Agricultural Education 811, Administration and Supervision, 3 hours
Agricultural Education 621, Curriculum Development, 3 hours

Nine hours to be selected from the following:

641, Occupational Experience in Agricultural Education,	3 hours
684.10, Internship in Agricultural Education,	3 or 5 hours
693, Individual Studies,	2 or 3 hours
770, Evaluation,	3 hours
790.21, Workshop for Supervisors,	3-5 hours
885, Research Methods,	3 hours

Other desirable electives for the prospective supervisor include:

622, Continuing Education in Agriculture	3 hours
631, Methods in Teaching Agriculture	3 hours
642, Youth Organizations in Agriculture	3 hours
795.03, Seminar in Leadership Development	1-3 hours
795.06, Seminar in Communication	1-3 hours
810, Principles of Vocational-Technical Education	3 hours
823, Program Planning and Development	3 hours

Public Information

Every faculty member of the department contributed to a public information program on agricultural education. Warmbrod is consulting editor of The Agricultural Education Magazine. Bender prepared ten issues of "TEACH," a newsletter for staff members and graduate students. Boucher edited "Ohio Agricultural Education News," which is published quarterly and distributed to all teachers in the state as well as leaders in other states. A total of 983 copies of the publication is mailed quarterly.

Members of the staff have had articles published during the past year in the American Vocational Journal, the Agricultural Education Magazine, the Ohio Vocational Reporter, the National Future Farmer, the

Ohio Farmer, and the Journal of American Association of Teacher Educators in Agriculture. The staff assisted the Ohio Vocational Agriculture Teachers Association and the state supervisors in publicizing vocational agriculture activities at the Ohio FFA Convention, the Ohio Young Farmer Convention, the Ohio State Junior Fair, the Annual Teachers Conference, and the Farm Science Review.

Other public information activities included Guiler's service as Membership Secretary of the Ohio Vocational Association and Boucher's service as a member of the American Vocational Association Public Information Committee. Numerous items have been published in University channels such as the faculty staff bulletin, the blue sheet and the faculty information service. Majors in the Department of Agricultural Education have served as a speakers bureau for local high schools emphasizing teaching agriculture as a career.

Facilities

The Department is provided 13 offices, 5 secretarial stations, one conference room, three rooms for 30 plus graduate students, two readily available classrooms, and such others as needed in the Agricultural Administration Building.

Finances for the year limited the additions to facilities to the following: drapes in Room 208, table and four chairs, upholstering 16 chairs, two filing cabinets, and refinishing one desk.

Space for staff and storage is urgently needed. The lack of air conditioning is affecting staff efficiency. Considering the work load of the staff in the Department during the summer months, it seems most essential that provisions be made to secure air conditioning. At the time of preparing this report plans were underway to install six window units.

Long range plans call for a new construction south of the Agricultural Administration Building and Stadium Drive to house the Department of Agricultural Education as well as the other departments of vocational education on the campus, the Agricultural Library, and a Teaching-Learning Center for the College. The target date for the project has not been determined.

The preliminary planning for the vocational-technical facilities is being done by representatives of the various vocational services including Wolf from agricultural education. The first report was presented in June 1971. It gave the historical background, functions, uniqueness, impact, service areas, priorities, minimum number and room sizes, number of offices and rooms, office size, room area requirements, room specialization, and faculty locations.

The final report was presented to Deans Roy M. Kottman and Luvern Cunningham in June, 1972.

Alumni Association

At the annual meeting of the College Alumni Association held on March 25 at the Center for Tomorrow, James Dougan, as recommended by the Department, was awarded a Distinguished Alumni Award. There was no special meeting of the Alumni Association for the Department during the year. However, the Executive Committee did meet to set up preliminary objectives for the annual meeting during 1972-73.

Biennial Plans - 1973-75 and 1975-77

The Department of Agricultural Education proposed the following program improvements and new programs to the College of Agriculture and Home Economics to be initiated and developed during the 1973-77 period. The various programs and a brief analysis of their scope beginning in 1973 are as follows.

1. Air Conditioning . . . . . New Program

The offices and special classrooms of the Agricultural Education Department should be air conditioned. This facility will result in more efficiency on the part of the total staff. Air conditioning is particularly needed because of the amount of activity and work during the summer quarter. It is estimated that such a program would cost $60,000 if central air conditioning is installed. If window units are used, the cost is estimated at $10,000.

2. Research and Development . . . . . Program Improvement

The major purpose of this program is to further expand and develop the program of research in the department. The establishment of a research department, including both vocational-technical and extension education, as an integral part of the Ohio Agricultural Research and Development Center as identified in the long-range plans of the College is proposed. The request calls for an additional faculty member, a research associate, and a part-time secretary to begin July 1, 1973. Priority emphasis of the research includes development and assessment of the use and effectiveness of learning resources and new instructional media; estimation of employment opportunities in occupations requiring knowledge and skill in agriculture; evaluation of educational programs in local and area schools, post-secondary technical institutes, and extension programs; and the establishment, conduct, and appraisal of pilot programs in vocational and extension education. The estimated cost of this program is $23,800, one-half of which is to be provided by OARDC.

3. Individualized Instruction . . . . . New Program

This program emphasizes improvement of instruction through the

initiation, demonstration, and experimental use of individualized instruction procedures and techniques. Attention will be focused on individual differences and varied needs of students in complementing and supplementing regular classroom instruction. It is anticipated that instructional units will be located in the Agriculture Library.

Present faculty can initiate and design the program; however, a full-time visual-graphic artist is needed. This person is to develop differentiated learning materials and instructional aids as well as operate and maintain audio visual equipment. A research associate is also essential to help students make the most effective use of the materials and equipment. It is estimated that costs beginning July 1, 1973 would be $17,400.

4. Visual Communications Course . . . . . New Program

The Curriculum Committee of the College of Agriculture and Home Economics suggested the offering of a new course "Visual Communications in Agriculture." The department is proposing that such a course be offered beginning the autumn quarter 1973. It is anticipated that at least 150 students would be enrolled during the three academic quarters. A new staff member is needed to begin the development of this course and align appropriate presentation aids. The estimated cost of the new staff member, supplies, travel, and equipment amounts to $20,650.

5. Preparation of Specialized Personnel . . . . . New Program

This proposal includes three segments: (a) undergraduate internship in agricultural occupations; (b) preparation of area school supervisors in agriculture; and (c) improved preparation of teachers for vocational horticulture.

To qualify for the new certification standards it is necessary for all prospective teachers to have at least one year of occupational experience. The University should help provide and supervise this experience in selected business establishments and agencies throughout the state. This experience should be individually planned and supervised in order for it to be more meaningful. It is proposed to secure selected teachers of vocational agriculture to assist in providing some of the on-site visitations.

Due to rapid expansion of vocational education in agriculture, it is anticipated there will be a need for preparation of 35 supervisors in addition to 20 who are presently serving as local supervisors of agriculture. A part-time staff member is needed to develop this pre-service and in-service program that will meet state certification standards as well as make the program more effective.

About 100 teachers of vocational horticulture will be working in Ohio schools in 1972. These teachers need special in-service education

and more assistance is needed in the preparation of future teachers of vocational horticulture. A one-half time faculty member employed in cooperation with the Department of Horticulture could provide the teaching and other in-service education.

These three programs necessitate 1.12 FTE staff, 1.25 secretaries, and one research associate. The total cost as of July 1, 1973 is $33,925 including $5,000 for travel which would be provided from State Department funds.

6. Youth Development . . . . . Program Improvement

This program consists of preparation of professional youth workers who have a responsibility for the development of youth education programs primarily outside the public schools. The major emphasis will be for the development of competence to work with the 4-H club program. Youth workers in other non-governmental youth programs might also be engaged in such a program. Additional part-time faculty members are needed to support one additional undergraduate course and four graduate level courses designed specifically for youth personnel. The graduate courses include (1) Development of Youth Education Programs, (2) Camp Program Development and Administration, (3) Volunteers in Development of Youth Education, and (4) Administration of Youth Education Programs. This program can be initiated in 1973 with the addition of a .4 FTE faculty member and a part-time secretary necessitating a total cost of $7,825.

7. Curriculum Development and Instructional Materials . . . . . Program Improvement

The department is interested in further expansion and improvement of curriculum and instructional materials as a service to teachers of vocational agriculture. This service includes the curriculum development for the specialized programs in vocational agriculture, their evaluation, and dissemination. Non-credit, in-service programs should be developed with the teachers as well as conducting research including pilot and demonstration programs. This expanded program starting in 1973 necessitates a new staff member, two secretaries, three graduate associates, and two persons on wages. Cost is estimated at $87,500. Of this amount, $78,000 would be available from outside sources including earnings of the service and contributions from the State Department of Education.

8. Preparing Personnel for Agricultural Technician Education Programs . . . . . New Program

This is an effort to provide leadership in developing and conducting educational programs to prepare teachers and other personnel for service in institutions where agricultural technicians are being trained. This includes in-service education to persons presently engaged in such programs as well as a long-range, continuing, pre-service program. It

is assumed that this program will be initiated July 1, 1972 if Dr. Halterman's salary is provided through funds in technical education. The salary and position in the department then would be used to employ the person to head up this phase of the program. If this is not realized, it is proposed that the program be initiated as of July 1, 1973. In addition to the faculty member, a part-time secretary and one research associate are needed. The costs of the program are estimated at $27,400.

THE STAFF IN AGRICULTURAL EDUCATION, 1971-72

Name and Title	Sources for Salary: Teach Educ	Supvn in Vo-Ag	Coop Ext	Other	Notes
Professors					
Bender, Ralph E.	X		X		Chairman of Department
Boucher, Leon W.	X				Professor 7-1-71
Cunningham, Clarence J.	X		X		Professor 7-1-71
Cehres, Albert F.			X		
Guiler, Gilbert S.	X				
Halterman, Jerry J.				College of Agriculture	Director, Technical School at Wooster
Johnson, Carlton E.				Dept. of Agr. Engineer.	In charge of agr. mechanics
McCormick, Robert W.	X			University Administration	Assistant Vice President in charge of Continuing Education
Ritchie, Austin E.				College of Agr. Admin.	Assistant Dean
Robinson, D. B.					Professor Emeritus
Taylor, Robert E.				Center for Voc.-Tech. Ed.	Director of Center
Warmbrod, J. Robert	X				
Watson, William H.				University College	Associate Dean and Professor 7-1-71
Wilson, Richard H.	X				
Wolf, Willard H.	X				
Wood, Wilbur B.					Professor Emeritus
Woodin, Ralph J.	X				
Associate Professors					
Bolender, Elbert O.					Emeritus, Supervisor of Voc. Agr.
Bruny, Seifrid P.			X		Started 7-1-71
Hull, William L.				Center for Voc.-Tech. Ed.	
Jenkins, David D.	X		X		
Magisos, Joel H.				Center for Voc.-Tech. Ed.	Associate Professor 7-1-71
Robinson, Ted R.				University Administration	Associate Professor 7-1-71
Schroeder, Wayne E.				Center for Voc.-Tech. Ed.	
Starling, John T.	X	X			Associate Professor 7-1-71

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THE STAFF IN AGRICULTURAL EDUCATION (CONTINUED)

Name and Title	Sources for Salary: Teach Educ	Supvn in Vo-Ag	Coop Ext	Other	Notes
Assistant Professors					
Borcher, Sidney D.				Center for Voc.-Tech. Ed.	Resigned 12-20-71
Budke, Wesley E.				Center for Voc.-Tech. Ed.	Started 7-1-71
Geyer, Richard E.				OARDC & College Admin.	
Gray, Kenney E.				Center for Voc.-Tech. Ed.	Started 7-1-71
Hamilton, James B.				Center for Voc.-Tech. Ed.	Started 7-16-71; Located at University of Missouri
Koble, Jr., Daniel E.				Center for Voc.-Tech. Ed.	Adjunct Assistant Professor 3-1-72
Lau, Duane B.			X		Started 7-1-71
Leidheiser, Paul C.			X		Started 7-1-71
Lifer, Charles W.			X		Assistant Director 4-H
McCaslin, Norval L.				Center for Voc.-Tech. Ed.	Started 7-1-71
McCracken, J. David				Center for Voc.-Tech. Ed.	
Norton, Robert E.				Center for Voc.-Tech. Ed.	Started 8-15-71
Oren, Jr., John W.			X		
Ruble, Floyd J.					Emeritus, Supervisor of Voc. Agr.
Waliser, Don H.				College of Agr. Admin.	Assistant Professor 7-1-71
Young, Clair W.			X		Started 7-1-71
Young, Richard E.	X		X		Assistant Professor 7-1-71
Instructors					
Archer, Clyde F.				Biological Sciences	Assistant Dean
Pulse, Paul F.		X			
Coordinator					
Gutilla, John J.				Research & Survey*	
Specialist					
Windle, Barbara H.				Research & Survey	Started 9-1-71

*This is a service of the Division of Vocational Education, State Department of Education.

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Name and Title	Sources for Salary: Teach Educ	Supvn in Vo-Ag	Coop Ext	Other	Notes
Consultants					
Barnett, C. Welch		X			
Davis, John H.		X			
Dougan, James E.				State Dept. of Education	Asst. Director of Vocational Education
Gehm, Edgar H.				Research & Survey	10-4-71 to 6-30-72
Koon, Robert H.				Research & Survey	Terminated 9-15-71
Kosbab, George C.				Research & Survey	
Morgan, John P.		X			
Petrie, Edwin T.				Research & Survey	Started 10-18-71
Ridenour, Harlan E.		X			Director, Curriculum Materials Service
Sterling, George A.				Research & Survey	
Tower, C. O.				Research & Survey	Director
Watkins, John W.		X			
Associates					
Bloss, Norman F.	X				Technical educ. with Halterman, Su,A
Cummins, James E.				OARDC	Eval. of technical education,Su,A,W,S
Farrington, William S.		X			Instructional materials, Aug., Sept., A,W,S
Gliem, Joseph A.		X			Instructional materials, Su,A,W,S
Hillison, John H.		X			Instructional materials, Su,A,W,April
Howell, David L.		X			Instructional materials, Su,A,W,S
Hutchings, Ronald P.	X				Technical educ. with Halterman, Su,A
Kowalka, Ronald C.		X			Instructional materials, A,W,S
Neavill, Arthur T.		X			Evaluation of 9th & 10th agr.,A,W,S
Newcomb, L. H.	X				Assisted in undergraduate teaching, Su,A,W,S
Parker, Kenneth A.		X			Identifying horticulture needs, Sept., A,W,S
Roediger, Roger D.		X			Instructional materials, S
Shane, James A.	X				Technical educ. with Halterman, A,W,S
Shannon, Theodore P.		X			Instructional materials, Su,A,W,S
Stanley, Norman M.				College of Agr. Admin.	Technical educ. with Halterman, Su,A, W,S

THE STAFF IN AGRICULTURAL EDUCATION (CONTINUED)

Regular Clerical Staff--Susan Byrd, Sue Cluxton, Martha Ervin, Louise Goodall, Mary Krieger, Faye Malone, Zelma Parker, Sherry Pruitt, Evelyn Roediger, Connie Rummel, Barbara Satchell, Susan Wenger, Julia Williams, Claudia Wolf.

Part-time Clerical Staff--Joy Ailes, Robert E. Baker, Donald Boyd, Leonard Conley, Clarence Fridline, Sandra Gutilla, Mary Joyce, Shirley Kosbab, Joanne Lux, Joan Lyle, Anita Martin, Beverly Newcomb, Flora Nicholson, Susan Prodell, Virginia Sergent, Grace Stearns, and Edgar Yoder.

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SOME STAFF SERVICES AND PUBLICATIONS
(As Reported by Staff and Not Included Elsewhere in the Report)

Ralph E. Bender, Professor and Chairman

American Vocational Association
- Received Outstanding Service Award
- Chairman of Constitution Committee

College Committees
- Executive Committee
- Planning Committee to conduct program for improvement of resident instruction
- Technical Education Advisory Committee
- Evaluation of faculty--teaching and counseling
- Research and Training Programs Involving Human Subjects
- Honorary Degrees

Address, Central States Seminar in Chicago, "Whither Vocational Education--In Our Professional Relationship"

Member, Ohio FFA Board of Trustees

Member, The Century Club, The Ohio State University Development Fund

Publications:

"Relationship of Student Characteristics and Program Policies to Participation in FFA" (A Research Report with Richard F. Welton), Department of Agricultural Education, The Ohio State University, July 1971

"The 1971 Occupations of Recent Graduates of Vocational Agriculture in Ohio," Department of Agricultural Education, The Ohio State University, September 1971

Adult Education in Agriculture (with Cunningham, McCormick, Wolf, and Woodin), Charles E. Merrill Publishing Company, Columbus, 1972

"W. F. Stewart: A Pioneer in Developing Vocational Agriculture" (with Willard H. Wolf), The Agricultural Education Magazine, February 1972

"Agricultural Technician Education in Ohio, 1970-71" (A Research Report with James E. Cummins), Department of Agricultural Education, The Ohio State University, April 1972

"The Individual and Purposes of Vocational Education," Chapter in 1972 Yearbook, American Vocational Association (in press)

Leon W. Boucher, Professor

Member, AVA Public Information Program Committee

Secretary, Agricultural Education Staff Meetings

Serve on joint staff production agriculture committee

College of Agriculture International Affairs Committee

University Senate alternate--Agriculture

President, Gamma Sigma Delta

Publications:

"The Status of Teacher Education Programs in Agriculture," Journal of the American Association of Teacher Educators in Agriculture, March 1972

Editor, "Ohio Agricultural Education News"

Clarence J. Cunningham, Professor (and Assistant Director, Staff Development and Program Analysis, Cooperative Extension Service)

Chairman, ECOP Subcommittee on Program Development and Management Information Systems
Visiting Professor, National Extension Summer School, Colorado State University, June 1972
Member, College Committee on Academic Affairs
Member, College Executive Committee
Member, Cooperative Extension Service Administrative Cabinet
Member, Adult Education Association of USA
Member, Commission on Professors of Adult Education
Member, Ohio Adult Education Association
Member, College Graduate Education and Research Committee
Chairman, Cooperative Extension Annual Conference
Consultant, University of Illinois Cooperative Extension Administrative Conference on Evaluation, December 1970

Publications:
Adult Education in Agriculture (co-author), Charles E. Merrill Publishing Company, Columbus, Ohio, 1972
Research-in-Brief Editor, Journal of Extension
"Opinion Leadership on Family Living Among Low Income Homemakers in the Expanded Nutrition Program in Ohio" (Research Report with Doris Steele), Department of Agricultural Education, The Ohio State University, 1972

Gilbert S. Guiler, Professor

Life Member, American Vocational Association and Ohio Vocational Association
Member, Membership Committee of the American Vocational Association
Chairman, Membership Committee of the Agricultural Division of the American Vocational Association
Chairman, Resolutions Committee of the COASTA Organization of the American Vocational Association
State Membership Secretary, Ohio Vocational Association and American Vocational Association for all divisions of vocational education. (Special recognition--Ohio's membership of the AVA ranked No. 1 in the nation)
Member, Board of Directors, Ohio Vocational Association
Member, The Century Club, The Ohio State University Development Fund
Member, State FFA Foundation Board of Trustees
Member, Petitions and Dismissals Committee, College of Agriculture
Chairman, Library Committee, College of Agriculture
Member, National Vocational Agriculture Teachers' Association
30 Minute Club
Agricultural Education Department representative to Phi Delta Kappa

Publications:
"How First Year Teachers Perceive Their Abilities," The Agricultural Education Magazine, Volume 42, No. 12
"The 'Plant of the Month' Aids in Public Relations," The Agricultural Education Magazine, Volume 44, No. 3
Contributed notes on membership to each issue of "The Ohio Reporter," Ohio Vocational Association

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Jerry J. Halterman, Professor (and Director, Agricultural Technical Institute at Wooster)

Secretary, Ohio Agricultural Technician Education Coordinating Committee
Member, Ohio Board of Regents Master Plan Review Committee on Technical Education
Member, College Executive Committee

Carlton E. Johnson, Professor (Department of Agricultural Engineering and Member of Graduate Faculty, Agricultural Education)

Member, State Advisory Committee for Technical Education in Agriculture
Member, Advisory Committee, Clark Technical College
Chairman, AA for VIM Subject Matter Committee
Member, Finance Committee, Ohio Vocational Agriculture Teachers Association
Member, National FFA Committee to select Agricultural Proficiency Award Winner in Agricultural Mechanics
Member, Safety Committee, College of Engineering
American Society of Agricultural Engineers:
- Chairman, A-214 Committee on Instruction in Mechanized Agriculture
- Member, A-202 Steering Committee Education and Research Department
- Representative, American National Standards Institute Committee Z 53.1, Safety Color Code
- Member, Ohio Section ASAE Member Nominating Committee
- Member, Ad Hoc Visiting Committee of the Engineering Technology, Engineering Council for Professional Development

Publications:
Radio Talk, "The Agricultural Engineering Farm Equipment Contest," WOSU

Robert W. McCormick, Professor (and Assistant Vice President for Continuing Education and Director, Center for Tomorrow)

Executive Council, Office of Educational Services
Vice Chairman, Administrative Advisory Committee on Continuing Education
Secretary, Board of Trustees, United Community Council
Executive Committee, Council on Extension, National Association of State Universities and Land-Grant Colleges
Chairman, Committee on Staff Development, National Association of State Universities and Land-Grant Colleges
Committee on Technology Utilization, National Association of State Universities and Land-Grant Colleges
Vice Chairman, Section on Continuing Education for the Professions, National University Extension Association
Director, Columbus Regional Information Service

J. Robert Warmbrod, Professor

Recipient of Distinguished Teaching Award, The Ohio State University
Chairman, Special Interest Group on Vocational-Technical Education, American Educational Research Association
Member, Committee for Research and Training Programs Involving Human Subjects, College of Agriculture
Member, Committee on Recruitment of Minority Students, College of Agriculture
Member, Graduate Education and Research Committee, College of Agriculture
Member, Honors Committee, College of Agriculture
Proceedings Recorder, Agricultural Education Division, American Vocational Association
Editorial Adviser, Occupational Education Series, Charles E. Merrill Publishing Company
Consulting Editor and Secretary, Editing-Managing Board, The Agricultural Education Magazine
Participant, American Educational Research Association Training Session on "Applied Linear Regression Analysis in Educational Research," University of Chicago, April 8-12, 1972
Visiting Professor, University of Minnesota, Summer 1971

Publications:
"Economics of Vocational-Technical Education." In Gordon F. Law (Ed.) Contemporary Concepts in Vocational Education, First Yearbook of the American Vocational Association, Washington, D. C.: American Vocational Association, 1971, pp. 362-373.
"Agricultural Education Division." Convention Proceedings Digest, Portland, Oregon, December 3-8, 1971. Washington, D. C.: American Vocational Association, 1972, pp. 117-136.
"Individual Goals and Vocational Education." In Alfred H. Krebs (Ed.), The Individual and His Education, 1972 Yearbook, American Vocational Association (in press)

Richard H. Wilson, Professor

National Committee on "Employment Opportunities and Training Needs in Agribusiness"; participating as coordinator of state study
Chairman, Joint Staff Curriculum Committee on Undergraduate Study for Agricultural Mechanics
Staff representative for developing Career Education Programs and Consumer Education Programs

Publications:
"Management Performance Pays Off--In Profits," The Agricultural Education Magazine, February 1972 (with John Starling)

Willard H. Wolf, Professor

Secretary-Treasurer, Agricultural Education Alumni Association
Chairman, College Coordinating Counselors Committee
Member, College Committee for Academic Assistance Program
In charge of chemistry tutoring for AAP students and counseling freshmen students who designated intentions to major in agricultural education
Member, Committee of Joint Agriculture and Education Colleges' Vocational Facilities Committee
Department Coordinator of Agricultural Education Scholarships
Member, Committee for Residence Halls for College Students of Agriculture and Natural Resources

Publications:
Faculty Editor, Townshend Educator
Published the Agricultural Business Workshop Report for 1971
Adult Education in Agriculture (co-author), Charles E. Merrill Publishing Company, Columbus, Ohio, 1972
"W. F. Stewart--A Pioneer in Developing Vocational Agriculture" (with Ralph E. Bender), The Agricultural Education Magazine, February 1972
"Using Advisory Committees Wisely" (with John Mulvana), The Agricultural Education Magazine, February 1972

Ralph J. Woodin, Professor

Member, Vocational Education Curriculum Committee, College of Education
Member, Recruitment Committee of the College of Agriculture
Adviser, Ohio Recruitment Commission
Member, Technical Education Advisory Committee, College of Agriculture
Member, Overall Planning Team for Long Range Planning in Agriculture 1985-2000

Publications:
"A Procedure for Determining if a Significant Difference Exists Between Two Percentages Calculated from Independent Samples" (with Wiley B. Lewis), The Journal of the American Association of Teacher Educators in Agriculture, July 1971
"Migration Patterns of Vocational Agriculture Graduates in Ohio" (A Research Report with Warren G. Noland), Department of Agricultural Education, Ohio State University, August 1971
"Vocational Horticulture Records" (with Kenneth Parker), Ohio Agricultural Education Curriculum Materials Service, August 1971 (revised edition)
"Consumer Education in Agriculture." A Curriculum Guide for Teachers of Vocational Agriculture, Ohio State Board of Education, Division of Vocational Education, September 1971 (editor)
"Improvement Projects in Vocational Agriculture," Department of Agricultural Education, The Ohio State University, September 1971
"Planning Your Vo-Ag Program for the Seventies," The Agricultural Education Magazine, October 1971

Woodin (continued)

"New Approaches to Occupational Exploration in the Middle School" (with Wesley E. Budke), The Journal of the American Association of Teacher Educators in Agriculture, November 1971.
"Supply and Demand for Teachers of Vocational Agriculture in 1971," Department of Agricultural Education, December 1971.
"Change Needed in Agricultural Mechanics Curricula" (with Wiley B. Lewis), The Agricultural Education Magazine, January 1972.
Adult Education in Agriculture (co-author), Charles E. Merrill Publishing Company, Columbus, Ohio, 1972
"Teacher Shortage Continues in Agricultural Education," The Agricultural Education Magazine, April 1972
"Changes in Agriculture" (88 individual county reports based upon selected facts from the 1969 Census of Agriculture for Ohio). Issued jointly by the Ohio Department of Education Curriculum Materials Service and The Ohio State University, Department of Agricultural Education, May 1972
"Using Improvement Projects to Supplement Occupational Experience Programs in Agriculture," The Agricultural Education Magazine, June 1972.

David D. Jenkins, Associate Professor (and State Leader, Professional Improvement, Cooperative Extension Service)

Member, Steering Committee, National Extension Curriculum Development Seminar
Member, Ad Hoc Publications Committee, National Extension Curriculum Development Seminar
Ohio's Liaison, Journal of Extension, Extension Journal, Inc., Madison, Wisconsin
Member, Educational Program Committee, The Ohio Farm and Home Electrification Council, Inc.
Keynote speaker, 26th Annual Local Leaders Conference, The Ohio Education Association, August 1971--"Leadership--A Task with Vision"
Member, Committee on Resident Improvement of Quality of Instruction, College of Agriculture

Publications:
"Inventory of Professional In-Service Training Needs," Ohio Cooperative Extension Service, August 1971
"Developing a Leadership Program for Volunteers Working with Youth from Low Income Families in the EFNEP," Ohio Cooperative Extension Service, October 1971
"Leadership Processes--Isrodemur," speech and visual presentation, 26th Annual Local Leaders Conference, The Ohio Education Association, August 1971

John T. Starling, Associate Professor

Conducted a farm business management class for 17 branch managers of the National City Bank of Marion County
Consultant, USOE Project on "Career Education Curriculum for Vocational Agriculture Students."
Member, Swine Improvement Committee
Attended Regional Conference on "The Use of Simulation Materials in Training Administrative Personnel."

Publications:
"Mr. Farmer, Do You Want to Analyze Your Business?" Department of Agricultural Education, Department of Agricultural Economics, and State Department of Education brochure.
"Dynamic Careers in the Broad Field of Agriculture," Department of Agricultural Education and State Department of Education.
"Management Performance Pays Off--In Farm Profits," The Agricultural Education Magazine, February 1972 (with Richard H. Wilson).
Curriculum Materials:
"Farm Money Management" (with Bert Showman).
"Farm Records--A Management Tool" (with Jerry Berg).
"Unit Budgets for the Major Livestock and Crop Enterprises" (with William Hudson and Roger Nicol).

Richard E. Young, Assistant Professor (and Leader, Studies and Evaluation, Cooperative Extension Service)

Adviser, OSU Farm Bureau Youth Council
Member, Ag Student Board of Control
Chairman, Epsilon Sigma Phi Slide Contest Committee
Member, Professional Improvement Committee of Ohio Extension Professors Association

Publications:
"Perceptions of 4-H Club Work Held by Farm and Nonfarm Parents," Abstract of a thesis by John Ruoff.
"Area and Traditional Staffing Pattern Study, Annotated Bibliography" (with Cunningham and P. B. Moore).
"Evaluation Analysis, 1972 Pesticide Up-Date Workshops"
"Evaluation Report, Farm Management Workshop, October 1971"
"Evaluation Report, Agronomy Workshop, November 1971"
Review of the Book, Classroom Out-of-Doors: Education Through School Camping by Wilbur Schramm in Journal of Extension, Spring 1972.

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THE TRANSFORMATION OF TRAINING. NEW KINDS OF CONSUMER-BASED SERVICES REQUIRE NEW KINDS OF TRAINING--BASED ON PARTICIPATORY SIMULATION.

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ABSTRACT - HUMAN SERVICES IN THE PAST HAVE GENERALLY BEEN INSENSITIVE AND NON-RESPONSIVE TO THE NEEDS OF THE CONSUMER; SERVICE HAS BEEN MORE DETERMINED BY THE SERVICE GIVER WITH VERY LITTLE CONCERN GIVEN THE GENERAL PUBLIC. EFFORTS ARE NOW BEING MADE TO CHANGE THE PREVAILING ATTITUDE. HOWEVER, THIS CAN BE DONE ONLY IF THE MODE OF TRAINING IS CHANGED FROM THE BROAD-SCOPED, DIFFUSE, INDIRECT, AND TIME-CONSUMING OPERATION THAT IT NOW IS TO A MORE NARROW SKILL-CENTERED EFFORT WHICH ALLOWS FOR PARTICIPATION. PRESENTED IN THIS DOCUMENT IS A PARTIALLY DEVELOPED SIMULATION TRAINING MODEL WHOSE CURRICULUM IS BASED UPON THE TASK ANALYSIS OF THE TRAINEES' NEEDS, AND A JOB DESCRIPTION OF WHAT THE NEW WORK WILL BE LIKE RATHER THAN SIMPLY AN IMITATION OF WHAT THE EXISTING PROFESSIONAL DOES OR DOES NOT DO. IN SO DOING, HE (THE TRAINEE) IS HIMSELF BEING TRAINED AS A TRAINER. CHARACTER AND SENSITIVITY ARE THUS DEVELOPED THROUGH PARTICIPATION. (AUTHOR/SN)

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THE TRANSFORMATION OF TRAINING

New kinds of consumer based services require new kinds of training - -

Based on

PARTICIPATORY SIMULATION

by

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There is considerable new concern that the human services in America become more efficient and sensitive, less determined by the service giver and more accountable and responsive to the consumer. If this is to take place, the training of the service worker will have to be radically transformed. At the present time, most such training is not sharply pinpointed in relation to the specific skills required to perform services such as teaching--rather, broad education is stressed and the training is essentially diffuse, indirect, and prolonged. Furthermore, neither the content, form, nor style of the training reflects adequately the new service styles nor are they preparatory for it or derivative from it.

A comparison of the training of two other kinds of workers--plumbers and airplane pilots--provides clues regarding what a positive training model might look like.

Plumbers vs. Pilots

It takes four years to train a plumber but only 18 months to train an airplane pilot. If one looks at the training designs in the two areas, one can readily see why. Plumbers are generally trained in an apprenticeship model which unnecessarily stretched out the training process. Airplane pilots, by contrast, learn to fly essentially by the use of simulators, such as the Link Trainer. The Link Trainer is essentially a cockpit on the ground. The trainee climbs into the

hooded cockpit and various problems are radioed to him in sequences of ever-increasing difficulty. He, in turn, attempts to handle them and receives feedback on his performance. As he masters each problem, he gains valuable skills which are tested in the next stage.*

The airplane pilot is trained in a carefully phased sequence using simulated exercises, directed toward training him for highly specific skills. His training is directed by experienced trainers, and there is a phased relationship between the simulational dimension and later in-flight training.

By contrast, the apprentice model permits an inexperienced trainer, who happens to be an able plumber, to train the novice entirely on the job. Not only is the plumber untrained as a trainer, but he actually has a job to do which, in many ways, interferes with and prolongs the training he is to give the apprentice. Furthermore, the particular job that he does on any day is not sequenced so that the trainee will learn the necessary skills in any particular order; rather, the apprentice sees and hopefully learns those dimensions of the job that are relevant to the performance of the work that the plumber is doing on any one day. Ultimately, the apprentice may have the opportunity of fitting the different parts together and, in a highly prolonged fashion, acquire the necessary skills. He performs the task under the watchful eyes of the experienced plumber but if he had the opportunity to do the task in a simulated, protected setting he would be able to try out various approaches without the danger of messing up the work itself.

*See Kevin Ryan, "A Plan for a New Type of Professional Training for a New Type of Teaching Staff," in Occasional Papers published by the National Commission on Teacher Education and Professional Standards, NEA, Occasional Paper #2, Feb., 1968.

Neither the plumber nor pilot, of course, are human service workers. The training of human service workers resembles much more the prolonged indirect pattern of the plumber model rather than that of the airplane pilot. The fact is that most human service workers have been trained in traditional professional model, which is not especially oriented to the rapid development of highly specifi skills leading to efficient consumer-focused servi es. Friedson, Hughes, and others have noted that accountability to one's professional peers was more the emphasis of the professional. In the teacher training model, for example, general education and broad knowledge is stressed more than specific skills that would make the service more productive. Thus, teachers are not effectively trained in teaching skills, are not selected for them or evaluated in terms of them; rather, the criteria for teacher selection is whether the individual has a B.A. degree and has taken the proper mix of courses in the field of education.*

Most professional training grew out of an elite tradition in which the major concern was that the professional-to-be acquire a definite point of view and perspective about the work he was to do. For example, he is trained to <u>be</u> a lawyer, not so much to <u>do</u> lawyering. Ralph Nader has described the process in legal education, where he says, "Law professors take delight in crushing egos in order to acculturate the students to what they called 'legal reasoning' or 'thinking like a lawyer.'" There was no particular hurry about the acquiring of the necessary skills. In fact, it was part of the entire tradition that he acquire these skills in a rather leisurely fashion via slow internships and apprenticeships from other peers.

*In some instances, the teacher-to-be takes a test, which is really a form of I.Q. test. These tests have never been validated in relation to teacher performance.

Most professional practice and training is directed toward (and often results in) maintaining a monopoly over the necessary skills and knowledge. Similarly, an effort is made to limit the number of people who could acquire professional skills and knowledge. Thus, restrictive licenses and expensive, prolonged training practices are highly suitable, just as they are very useful for the plumbers' union in maintaining its monopoly.

As there was no hurry to train the human service workers--whether doctors or teachers or social workers--and since there was no consumer carefully demanding accountability of the task performed, it was very easy to maintain the traditional highly stretched-out model of training and education, thereby protecting the semi-monopoly of the existing professional stratum.

In the present period, however, there is a whole wave of new demand from consumers, particularly the poor and the minorities who have complained bitterly about the character of the service provided by the professional. In addition, these same groups are demanding entrance into the professions; that is, they want to become doctors, lawyers, teachers, and they're not at all so sure that it should take so long to acquire necessary skills. Both of these pressures have led to the demand for performance criteria in evaluating the practice of the teacher, rather than traditional intelligence type tests which serve to screen in the middle class and screen out the poor. This is

all part of the general ethos demanding accountability to the consumer on the part of the teacher, or other practitioner, and new forms of education and training which will much more rapidly produce the new worker and produce him in a much more relevant, task-oriented, efficient fashion, perhaps something more like the airplane pilot--always recognizing that teaching has dimensions to it that are qualitatively different from teaching.

The Relation Between the New Services and the New Training

In order to see how training can be related to the new services, it is important to outline what the basic changes are that are emerging in the human services. Essentially services, like training, have been too professional centered and too removed from the consumer.

The first and most essential change that is necessary in the character of the human services is that they must be much more consumer oriented. Margaret Mead writes of the "revolt of all the people that are being done good to." She talks of pupils, patients, clients, prisoners, all wanting a share in what's going on, and an end to the era of "great numbers of professional people who knew best and did good."

This new consumer orientation should mean, in the first place, accountability--that the service is effectively used by the consumer, that children learn, that disturbed people get better, that sick people become well, that fewer people become sick, that fewer children drop out and get turned off from learning.

A second element in improving the effectiveness of a service is that it be offered in the style and mode of the consumer. This frequently means that a service be offered in a much more individualized, decentralized, culturally relevant fashion. Thus, neighborhood health

centers and family planning clinics, staffed by neighborhood residents have been used much more by poor people, who seem to find them much more attractive.

A third consumer oriented dimension requires that the service not only be effective and offered in a relevant fashion, but that the consumer also have the opportunity critically to evaluate the service whether it be as a student in the classroom, a member of a community board or a worker in a human service agency.

Finally, the fourth and perhaps most crucial dimension is related to the increasing evidence which indicates that an important aspect of effective service is the direct involvement of the consumer as service giver, for example, children teaching children, people with problems helping other people with similar problems such as Alcoholics Anonymous, Synanon, etc. There is increasing recognition, even in the field of medicine, that patients' knowledge and involvement can be very beneficial in preventing illness and in dealing with potential illnesses at an early point. The use of bio-feedback techniques is a growing new field, and doctors are now giving readings to patients regarding their illnesses, thus training them in self-help. Victor Fuchs states that what people do and don't to do and for themselves is the most important factor in improving the health of the American people.

If this consumer participatory dimension is a crucial feature in the drastic improvement of human services, then the training of human service workers must prepare the worker for it. This means courses and curriculum material with this focus. But even more than talk and reading about consumer participation, the training must isomorphically, as far as possible, reflect this dimension. This means in the first instance that the training itself must be highly participatory rather

than be trainer or professional centered. Since we want the teacher in the classroom to be responsive to the pupil, the social worker to the client, the doctor to the patient, we must insist that in the training the professor be responsive to the trainee and that the training be responsive to the trainee's needs including their perception of those needs.

Because we want services which are highly accountable and efficient, it also means that we need a training model that is geared to the development of the specific skills required for effective service delivery. And since consumers are expressing a strong need for many more effective services that cannot be long delayed, we need much more accelerated training designs.

The particular style, mode, and pattern of training is both derivative from the nature of the practice for which it is preparing the trainee, as well as preparatory for that practice. For example, as the old aphorism has it, "Teachers teach as they are taught, not as they are trained to teach." Thus, regardless of the words about participation, accountability and relevance, when teacher training programs emphasize routine facts, are professor-centered, and use traditional training designs, trainees, when they become teachers, are likely to teach that way.

There are then three key characteristics of the new services, each with their derivative consequence for training. First, the service is to be consumer centered. This leads to a participatory training design. Second, the service is to be accountable and efficient. This means that the training must effectively develop the workers' skills and, third,

as there is an expanding demand for services, the training must be as rapid as possible.

The Special Significance of Participatory Simulation

If modern training is to avoid the limits of the academic classroom as the major mode of instruction and the prolonged character of on-the-job apprenticeships, it will have to develop a new core. We believe that simulation, which, of course, is used in a good deal of skill training such as that of the airplane pilot, should be a central feature, a key mode around which human service training can take place.

In medical schools, computer models have been designed which present situations

> which might not otherwise be readily available to students. Situations have already been developed which offer the student the opportunity to manipulate data, make mistakes, get into trouble, and get out of trouble - all without endangering patients or using up valuable hospital time.
>
> Dr. Stephen Abrahamson and associates at the University of Southern California have developed a simulation model known as Sim One to facilitate clinical training in anesthesia. This life-size manikin has several functions, such as respiratory activity, skin color, and pupillary size, which are under the computer's control. Each function responds to drug administration as well as to other interventions used by the anesthesiologist in managing patients in surgery. This model can be used by a trainee to interact with a variety of situations that he will shortly encounter in the real-life operating room. He is allowed to deal with these situations repeatedly without risk to real patients and with immediate feedback about the effects of his judgments and his actions.

> Dr. William Harless and associates at the University of Illinois have developed a computer-aided simulation of the clinical encounter (CASE). During the interactive session, the computer assumes the role of the patient, and the student assumes the role of the practicing physician. Virtually any type of patient with any variety of health problems can be simulated.*

Simulation designs alone, however, do not fully fit our needs. Typical models, as in pilot training, or the computer designs of the medical school, set up situations to which there are "correct" answers; the training issue is to teach the student this proper way. However, there often are many "correct" ways of handling a problem or the "correct" way is not known. Thus, a less closed dimension of simulation must be used in which one of the goals is the development of individual styles, the collectivization of knowledge, the building of new techniques.

What is necessary is a participatory training design which grows out of the nature of the new services we seek. The greater use of teams and groups in service delivery in health, mental health, education, and social work will also be abetted by a participatory training design. And, as we see value in team members of different disciplines and differing backgrounds, one of the characteristics of the training should be the cross-socialization of the trainees. This group-centered training design should promote the development of practitioners who see, in their peers, sources of help and colleagueship rather than, as in

*Journal of Medical Education, "Educational Technology for Medicine," a special issue, July, 1971.

public school teaching, the teacher being the lord of and prisoner in her own classroom. Also, as relates to teaching, we believe that the learning process is most effective when all parties to the transaction are learning and, of course, a professor-centered training design constrains against seeing the teacher as a learner.*

Participatory simulation can be applied to all kinds of training--it can be used in the training of teachers, social workers, doctors, nurses, whatever. In the training of teachers for example, mock classroom situations are set up in which a number of teachers in training play the roles of children and one individual plays the role of the teacher. Various problems are role played or simulated: for example, some of the people playing the children may act disruptive or difficult and the "teacher" then practices various ways of dealing with these disruptive children. At first, she will probably tend to try out fairly standard approaches, such as punishing the disruptive child or bribing him by giving him a special assignment or taking him to the principal's office or asking to see his parents and so on. The group as a whole

*This point of the helper being helped, the teacher learning, appears most strongly in education as in the learning through teaching design (See Alan Gartner, Mary Conway Kohler, and Frank Riessman, Children Teach Children: Learning by Teaching, Harper and Row, 1971). However, the process can also be seen in the "helper therapy" principle in mental health and social work. Indeed, it may be true of the human services as a whole that the transaction between service giver and service recipient is most powerful when it is one of reciprocal gain.

then discusses what has occurred in the simulation to see if it could be done differently, what other approaches are possible. The group collectivizes its experience and brainstorms the problem at first suggesting other specific things and then moving more and more to possible things that could be done.

The trainers may introduce some new ideas or questions: Could the problem be dealt with by dealing with the group as a whole and not with individual disruptive children? Should a teacher change the lesson and try a different approach? Should the whole class discuss problems of discipline in the school? Perhaps the activity of the groups could be changed and a new activity introduced at a point where a number of youngsters are becoming disruptive. Perhaps even the disruption is an indicator to the teacher that the lesson is not effective, is not contacting the youngsters. Perhaps more indirect approaches such as changing the seating arrangement of the classroom might be effective in changing the whole atmosphere.

Then the trainees try out the various new approaches that they have themselves suggested and some that the trainers have suggested. They may actually change the seating structure of the make-believe "classroom" and see how differently it feels when people are seated around in a group than when they are in the standard rows and files; or they can move the chairs back further to be further away from the center, or move them close and see how that feels. That is, they actually do the problem, acting out the proposed solutions.

In this situation, the trainees slowly develop extended awareness of what can be done in the classroom situation as well as actual practice in working out the problems. From this, they begin to carve

out an expansion of their styles. Each will probably select some very different approaches from a large range of possible suggestions that the group comes up with. She fits these suggestions to her particular style which she becomes more conscious of and her repertoire is expanded. In doing the actual role playing or simulations, the trainee gets feedback, a mirror of how she looks and what is effective and what is not. Someone else in the group may actually play her. It is even possible to video tape the simulation and the trainee can get a direct look on video of how she behaves--a full mirror, so to speak. Teachers in training (or in-service training) may move from the simulated sessions to a micro-teaching design where they are able to practice some of their new skills in a controlled small-scale classroom with a small number of children. (The micro teacher can be videotaped, as can the simulated sessions, providing a mirror for the lessons). They then may do some practice teaching where they are supervised carefully.

In cases where the trainees are also involved in classroom work, the teacher takes back her new learnings and practices them in the actual classroom. Some things will work very well, but there will be other problems that were not anticipated; the teacher brings these new experiences back to the simulational sessions for further discussion and the development of new approaches for solving the unanticipated difficulties.

Training in the Mental Health Field

In training paraprofessionals, for example, to work as mental

health aides in neighborhood service centers, it is important to teach them how to interview clients and how to deal with various social agencies. The situations which they will encounter are carefully broken down and simulated so that initially, for example, one paraprofessional would role play a community person coming into a center for help and another paraprofessional would play the interviewer who would be providing help in a center. (Parenthetically, it is important to note that the role reversal aspect of this, that is the opportunity of the worker to play the client, is extremely valuable for providing understanding in how that person feels and experiences the situation. Thus, in the above examples, playing the role of children is valuable for teachers in training in helping them to understand how children perceive teachers, the classroom, and the school.)

Slowly, the paraprofessional acquires skill in various aspects of interviewing. Initially very simple problems are presented, such as the client coming in who needs somebody to sign a paper because he himself cannot write, or a little later on a client appears with a very simple problem that lends itself to easy solution. As the worker in training acquires skill in dealing with these simple problems and develops his own style through simulated practice, new and more difficult problems can be introduced. Ultimately, extremely difficult situations are presented. For example, a community person comes in and interrupts a simulated interview. The interruptor demands immediate attention and help, and does so in a rather disorganized chaotic fashion. Later the group talks over this kind of problem and develops various approaches for dealing with it, which they then further practice. In

a sense, the worker is (positively) overtrained. When he goes into the real life situation he may rarely experience problems as difficult as those presented in the simulated exercises, but he has acquired the power and skill to deal with them, which to some extent offsets the non-reality of the simulation in contrast to life.*

In training the paraprofessionals, the entire training should be carefully phased so that initially situations are simulated with appropriate overtraining and then the workers move into the neighborhood storefront centers for one-half day, carefully supervised and backed up by trained, experienced workers. Then they come back to the simulation sessions in the afternoon and discuss the problems that they confronted in real life in the centers in the morning. Slowly but surely they spend more time in the centers, on the job, with less intensive supervision.

The various human service fields are giving increased attention to training. In education, a great deal of activity has been inspired by the Education Professions Development Act, including programs such as The Career Opportunities Program (COP). The use of special training centers has gained attention in social work training, similar to education's laboratory schools and medicine's teaching hospitals. Innovative techniques are increasingly used, such as micro-teaching in education and the use of video-tape in several fields.**

*In fact, in the training at the Lincoln Hospital Mental Health Center, many of the paraprofessionals, when they later went into the centers, reported that the training was more difficult then the actual life situations. One is reminded of the way that Vince Lombardi trained the Green Bay Packers, where it was said that the practice sessions were much more difficult than the actual games.

**"Innovation in Education," by Norman F.R. Maier, American Psychologist (August 1971), Vol. 26, #8.

One of the more comprehensive training designs has been proposed as part of a Council on Social Work Education comprehensive training project (Jack Rothman and Wyatt Jones, A New Look at Field Instruction, 1971). The authors propose replacing the traditional reliance on agency placement with a phased design moving from a laboratory-observatory to a skills-development laboratory including the use of simulation games and programmed instruction, concluding with a practicum experience; in short, a much more conscious and explicit training design with attention given to particular experiences, specified learnings, discrete skills.

> In the laboratory-observatory the student will be exposed to a wide range of practice contexts, programs, and skills. The focus is on obtaining an understanding of the nature and settings of practice rather than on learning practice skills.
>
> The skills-development laboratory is oriented toward teaching specific practice skills to students in consciously selected and controlled content areas. Schools would expect to determine a delimited range of skills that they judge important for students to acquire by the end of the first year and prior to entry into actual agency practice (practicum). The skills-development laboratory is similarly attached to an academic methods course where theory or conceptualization relevant to the application of skills is treated in a systematic way. Thus, if students in the laboratory are being trained in methods of decision making in planning, the methods course will cover various theories of and approaches to decision making. "In the skills laboratory students would not be assigned to a given agency on a continuing basis but would engage in common experiences that might include simulation games, programmed instructional materials, community activities not connected with agencies, as well as tasks in selected agencies. Unlike the observatory, in the skills-development laboratory the students would be engaged in the actual "doing" of practice and the mastery of skills, but in a structured and controlled context.

> The practicum will begin in the second year and is conceived of as a holistic and realistic agency experience where the student is expected to put the skills he has previously acquired into operation under circumstances approximating those the practitioner experiences on the job. Thus, the student is expected to apply his skills (and learn others) under conditions of reality which include temporal and political pressures, structural restraints, interpersonal complications, etc. The disciplined use of self and need to grapple more immediately with value dilemmas come to the fore in this phase.

The Benefits of Participatory Simulation

What are the special benefits of a participatory simulation training design? The use of simulation facilitates the trainees learning from each other as opposed to a model which places the teacher in the role of sole dispenser of knowledge.

The teacher or human service worker has the opportunity in a protecting, permissive setting, to observe and try out a variety of real life problems without real life consequences. Most teachers, for example, do not have the opportunity in the classroom to experiment with different techniques, practices and approaches to tackling classroom problems; the risks are too great that any one method may produce disastrous results. Consequently, the teacher does not even mentally explore a variety of methods, but rather very quickly seeks

to develop something that works at least at a minimal level and then it becomes the way the individual deals with the problem. The particular way is frozen and becomes a rigidified part of the teacher's style forever. On the other hand, in simulation, the teacher in training not only has the opportunity of seeing a great variety of approaches, but can actually begin to use some approaches in a situation which is relatively easy at first, and thereby build up coping skills which can then be applied as the situation is made increasingly more difficult.

The simulational sessions can also serve to develop new conceptualizations and theory; thus, the group may discuss, under the leadership of the professor, why some children appear to be disruptive or apathetic. Is this due to the fact that the material being taught, or the way that it is being taught is not stimulating or contacting? From this, a discussion of the contact curriculum can emerge. There can ensue a discussion of why children of ghetto background may be antagonistic to the school, and hence sociological concepts emerge in a meaningful way around practice.

The traditional curriculum involves a professional functioning in a "deductive" model where he presents the basic ideas first, has the students react to them, and perhaps attempt to deduce applications for practice, if possible. The professor and his material is central in this design.

On the other hand, combining simulation with an "experience-based" or inductive curriculum, the center of gravity is shifted. The student's experience and phenomenally felt problems become focal, and the professor has to apply or develop ideas, concepts, and curriculum around these experiences.*

*The "clinical" professor has to learn a whole new way of teaching; he will also develop new knowledge based on practice and experience brought in by the students.

This design shifts the focus of instruction away from both traditional academic classroom instruction, on one hand, and on-the-job trial and error on the other. It demands far different skills of those responsible for the training of human service workers. For they must be capable of moving with ease between theory and practice, rather than being either ruminators about their experiences and practice, or pontificators over their own or others' theoretical notions.

The new service to be built is not limited to "the presenting problem", but must both respond to that phenomena and go beyond it. If it were a service which focussed exclusively on the immediate problem, technical skills might be sufficient. However, because the new service emphasizes both the immediate and the deeper phenomena, so in the training there should be a building of theory from a grounding in practice. Thus, the training design must move participants back and forth between theory and practice gaining insight into practice from the perspective of theory as the participant gains understanding of theory from the grounding in practice.

The simulational model combined with the inductive curriculum allows for the best integration of skills and knowledge so that the resultant product--the human service practitioner--is not simply a skilled technician, but rather a true professional for the essence of a professional is the integration of systematic knowledge and skill; either without the other is highly limited.

Simulations also allow for the development and practice of new roles. The teacher, for example, can practice working with other people in the classroom such as paraprofessionals, children who teach children, volunteers, specialists, as well as the use of various kinds

of programmed materials. The teacher has an opportunity to explore the new "orchestrator" role where he can be a diagnostician, a supervisor, a planner, a developer of small groups. This is the key to reorganizing effectively the teacher role and, we believe, is the basis for a leap in both teaching and learning. The entire simulation design that we have presented is clearly oriented in a participatory direction, and most of the new training exercises, games and sensitivity training are similarly highly participatory and non-hierarchal in character.

Simulation by itself is extremely valuable for developing skills, knowledge, and practice and hence is a major training technique for the improvement of service delivery. Participatory simulation, in addition, adds the group and peer dimension which are especially valuable if the training is to match the new participatory character of services. In other words, simulation as such is related to the efficiency of services while participatory simulation relates to the character of the services.

Conclusion

Professional training in the human services typically has not been explicitly skill-centered, nor participatory in character. Both of these features are essential for the services if their efficiency is to be sharply improved and their character transformed to make them more inclusive of the consumer.

Participatory simulation is both skill-centered and peer-oriented. By contrast, sensitivity training, while possessing clear participatory dimensions, is not at all oriented toward the development of skills. On the other hand, traditional simulation,* although strongly skill-centered, is not necessarily or self-consciously participatory.

What then are the desired characteristics of the new training model? It must be sharply related to a real improvement of the service for the consumer; it must assist in the changing of the traditional professional whether as service provider or trainer; it must be participatory and open in character. Trainees must be trained in ways in which they will perform.

The modern simulational-centered training design leads to much more rapid development of the trainee's skills. The new training is attuned to a new kind of trainee who cannot tolerate a long drawn-out apprenticeship under a professional who will slowly socialize him to traditional professional norms. It employs a skill-centered curriculum with systematic professional knowledge built around it.

Training, in order to be relevant and effective, has to be highly attuned to the tasks, the work, the activities to be done. This requires a careful task analysis of what that work is, so that skills can be built in a specific fashion. The curriculum is based upon the task analysis of what the trainee needs to do the job and a developed job description of what the new work will be like, rather than simply an imitation of what the existing professional does or is. The era where professional behavior was valued for itself because it was so difficult to assess its results is rapidly coming to an end.

*Sensitivity training, despite its lack of skill emphasis and its extreme orientation to self awareness, is a highly participatory, non-hierarchal process. That is, the boss and all the workers are equal in the sensitivity session at least. And anybody can say anything to anyone else.

Moreover, the new trainer is himself trained as a trainer; he is not just a smart man who happens to do some teaching like the able plumber who does the apprentice training, but who doesn't know anything about training.

Traditionally, most human service workers were given quite a bit of general education, but very little skill training.* Currently, the pendulum has swung the other way and we are certainly recommending the need for much more relevant pinpointed skill training for teachers and other human service workers. But unless this is combined with systematic professional knowledge, there is the danger that what will be produced is a group of narrow skilled technicians rather than new professionals. Hence, it is extremely important that the simulated sessions lead to and be focused upon broader issues and understandings, not simply skills and immediate practice. In addition, of course, much systematic professional knowledge will have to be developed and then become part of the total education and training pattern. Much professional knowledge at the present time is not sufficiently related to practice and field experience, nor is it sufficiently skill based. The revamping of professional knowledge will hopefully emerge from new practice and new training designs.**

*Law schools, for example, have traditionally seen their role as training students in the law, not in lawyering, which was to be learned in an apprenticeship during the first years of practice.

**Rapping, sensitivity training, and the contact curriculum all have value, but they are not enough. A real leap in the character of the services requires sound systematic professional knowledge that is well understood and flexibly applied. Skilled technicians can improve the human services beyond what they are now, but they will not produce the necessary leap, the reorganization, the real new effective human services that are so needed.

Epilogue

How is the new training to be produced? Where is it to come from? It is typical to think that the necessary expertise resides some place, perhaps in the minds of people who write articles like this one. It is further in tune with one of the fashions of the day to see this training emanating out in "multiplier" style from some central source, a "TTT" model (Training the Teacher Trainers). The assumption being that the training coming from some group or center will radiate out in waves to education professors or other teacher trainers who, in turn, teach teachers who teach the children. It is essentially a top down authority laden schema, just a more sophisticated version of the traditional professional model where doctor (teacher, professor) knows best.

The problem is, of course, that the new training models are not fully developed; they are in need of constant modifications and transformations, related to a rapidly changing practice. What is required, then, is the collectivizing or pooling of the experience of many field-based trainers who are close to the service giver, a constant building of ever-changing models from the bottom up, rather than the top down. The new models that emerge must be fed by practice and then dispersed to be tested in practice--in pre-service and continuous in-service training.

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IDENTIFIERS - *NEW YORK STATE

ABSTRACT - PRESENTED IN THIS PUBLICATION ARE SOME STATISTICAL HIGHLIGHTS OF THE OCCUPATIONAL EDUCATION PROGRAMS IN OPERATION IN THE PUBLIC, SECONDARY, ADULT AND 2-YEAR COLLEGE CURRICULUMS OF NEW YORK STATE DURING THE 1971-1972 SCHOOL YEAR. DEPICTED ARE PROGRAM ENROLLMENT FIGURES OBTAINED THROUGH THE AID OF THE OCCUPATIONAL EDUCATION DATA SYSTEM. INCLUDED IN THE ANALYSIS ARE THE SEX, RACIAL, AND ETHNIC COMPOSITIONS OF PARTICIPANTS. (AUTHOR/SN)

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STATISTICAL HIGHLIGHTS OF OCCUPATIONAL EDUCATION IN NEW YORK STATE

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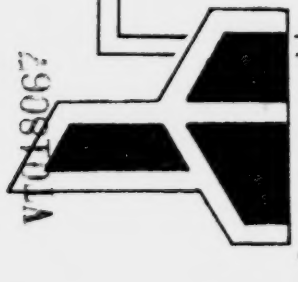
1971-72



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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of Occupational Education
Albany, New York 12210

3003

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PREFACE

This publication identifies and illustrates some of the more significant statistical highlights of occupational education in the public secondary, adult, and 2-year college programs of New York State during the 1971–72 school year.

These statistics have been compiled through the Occupational Education Data Subsystem, which annually collects data from the BOCES area occupational education centers, local school districts, public 2-year colleges, and urban centers. Through the cooperative efforts of the Department's Information Center on Education and participating agencies, more information is available than ever before regarding the dimensions of New York State's occupational education effort. It is now possible to provide such information as racial/ethnic and sex composition of enrollments at all levels of instruction in a variety of agency types. The intent has not been to report all of the data collected, but rather to highlight those statistics which may be of special interest.

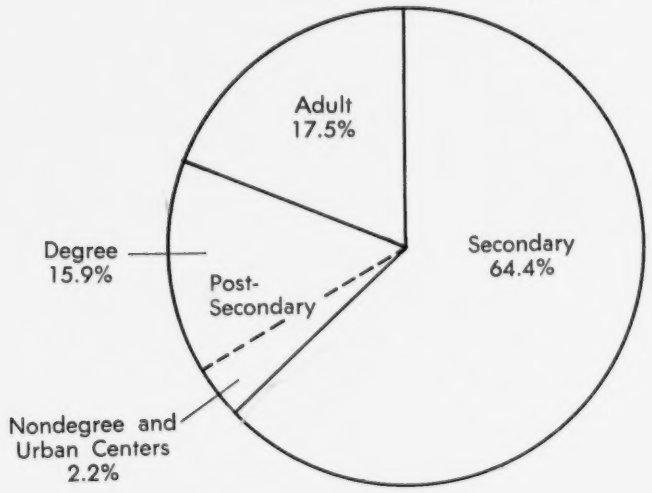
The term " adult," as used in this data analysis, refers only to those persons enrolled in an adult education program sponsored by a local public school district or a Board of Cooperative Educational Services. Part-time 2-year college students and urban center students are identified separately, although they are generally classified as adults and are included as a part of the total adult enrollment in the State Plan and the Annual Report for Occupational Education. These categories are kept separate in this publication because in comparing the enrollment statistics of one agency type with another, the distinction between an adult program conducted by a public school or BOCES area center and a program conducted at a 2-year college may be interesting and significant.

OVER HALF A MILLION SERVED IN OCCUPATIONAL EDUCATION PROGRAMS —

During the school year 1971–72, 543,135 persons were served in occupational programs by New York State's public educational agencies.

- 349,982 secondary students were served.
- 95,165 adults were served in public schools and BOCES area centers.
- 60,506 students were served in full-time degree programs at public 2-year colleges.
  25,733 students were served in part-time degree programs at public 2-year colleges.
  11,749 students were served in nondegree programs at public 2-year colleges and urban centers.

OCCUPATIONAL EDUCATION ENROLLMENTS
1971–72



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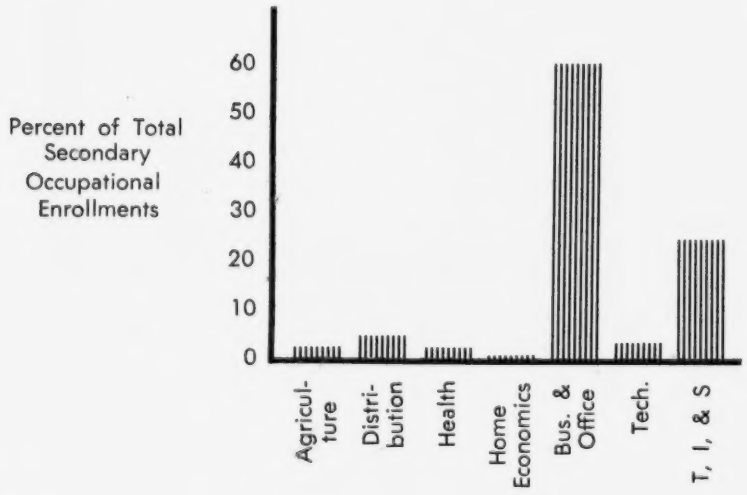
60 PERCENT OF SECONDARY ENROLLMENTS WERE IN BUSINESS AND OFFICE PROGRAMS —

- 209,087 secondary students were enrolled in Business and Office programs.
- 83,897 secondary students were enrolled in Trade and Industrial, and Service programs.
- The remaining 16 percent of the enrollments were distributed across the other five program areas.

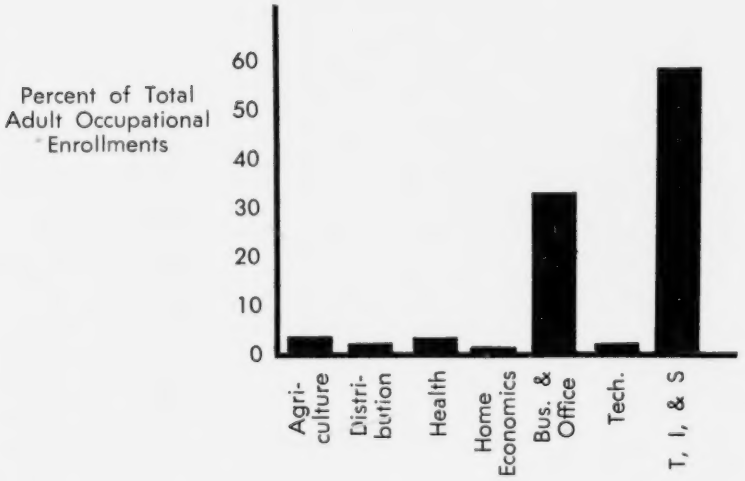
SECONDARY OCCUPATIONAL EDUCATION ENROLLMENTS BY PROGRAM AREA



IN PUBLIC SCHOOLS AND BOCES AREA CENTERS 57 PERCENT OF ADULT ENROLLMENTS WERE IN TRADE, INDUSTRIAL, AND SERVICE PROGRAMS —

- 54,703 adults were enrolled in Trade, Industrial, and Service programs.
- 30,392 adults were enrolled in Business and Office programs.
- The remaining 11 percent of the enrollments were distributed across the other five program areas.

ADULT OCCUPATIONAL EDUCATION ENROLLMENTS BY PROGRAM AREA



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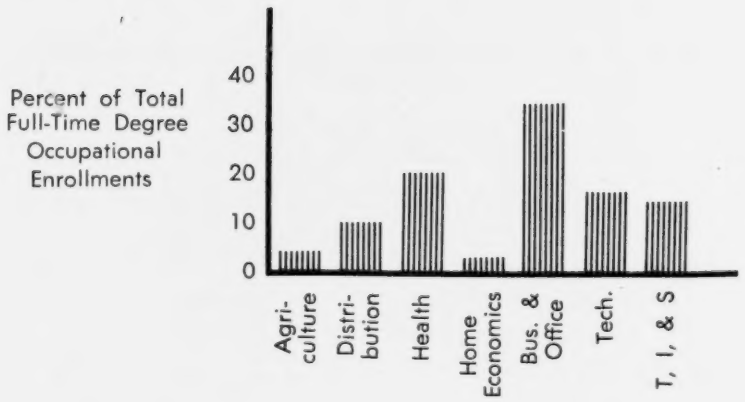
PUBLIC 2-YEAR COLLEGES SERVED OVER 60,500 OCCUPATIONAL EDUCATION STUDENTS IN A WIDE VARIETY OF FULL-TIME DEGREE PROGRAMS —

- The highest concentration of enrollment — 20,094, or one-third of the total enrollment was in Business and Office programs.
- Three other program areas served at least 10 percent of the total enrollment:

Health	12,356
Technical	9,596
Trade, Industrial, & Service	8,262

FULL-TIME DEGREE OCCUPATIONAL EDUCATION ENROLLMENTS BY PROGRAM AREA



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THE SIX MAJOR CITIES SERVED 40 PERCENT OF THE STATE'S SECONDARY OCCUPATIONAL EDUCATION STUDENTS, BUT 63 PERCENT OF THE ADULTS SERVED IN PUBLIC SCHOOLS AND AREA CENTERS —

- Secondary students served in occupational programs in the Six Major Cities far outnumbered adult students — 139,589 to 60,240 — but represented a smaller proportion of the total State enrollment than at the adult level.
- The following are among the reasons for this wide disparity:
  - Traditionally, it has been more feasible for large cities, where population is concentrated, to provide extensive adult programs, though more comprehensive programs at BOCES area centers are being developed.
  - Private and parochial schools are concentrated in urban areas, thus a relatively lower proportion of the school age population attends public school in the Six Major Cities than in other areas of the State.
  - High school dropout rates are highest in the Six Major Cities (over three times as high as for the rest of the State), both decreasing the secondary enrollment and increasing the need for adult programs in the cities.

DISTRIBUTION OF OCCUPATIONAL EDUCATION ENROLLMENTS AND POPULATION

Percent of State Total —
Six Major Cities and Rest of State

	Six Major Cities	Rest of State
Secondary Enrollments (Occupational Ed.)	40%	60%
Adult Enrollments (Occupational Ed.)	63	37
Public School Enrollments (9–12) *	38	62
New York State Population **	50	50

* 1970–71 school year.

** U.S. Department of Commerce, Bureau of the Census, *1970 Census of Population,* New York State, February 1971.

3010

OVER 78 PERCENT OF ADULTS ENROLLED IN OCCUPATIONAL EDUCATION IN THE PUBLIC SCHOOLS OF THE SIX MAJOR CITIES PARTICIPATE IN PROGRAMS TO UPGRADE THEIR SKILLS —

- Of the 60,240 adults served in the Six Major Cities, 47,243 were enrolled in adult supplementary programs.
- The Six Major Cities accounted for 63 percent of all New York State's adult enrollment, but three-quarters of the State's adult supplementary enrollments.
- The Six Major Cities also accounted for 71 percent of the State's apprentices receiving related instruction.

DISTRIBUTION OF OCCUPATIONAL EDUCATION ADULT ENROLLMENTS AND POPULATION

Percent of State Total —
Six Major Cities and Rest of State

	Six Major Cities	Rest of State
All Adult Programs	63%	37%
Adult Preparatory	21	79
Adult Supplementary	75	25
Apprentice	71	29
New York State Population*	50	50

* U.S. Department of Commerce, Bureau of the Census, *1970 Census of Population*, New York State, February 1971.

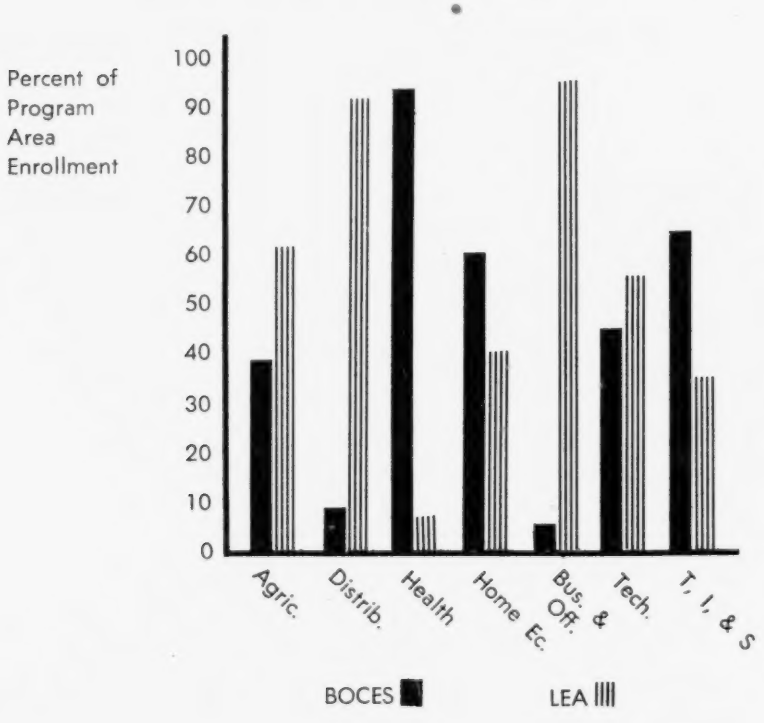
3011

BOCES SERVED THE MAJORITY OF SECONDARY OCCUPATIONAL EDUCATION STUDENTS IN NONOFFICE PROGRAMS CONDUCTED OUTSIDE THE SIX MAJOR CITIES —

- BOCES occupational centers, designed to conduct programs in areas of the State where limited enrollments in individual school districts prevent economical expansion of occupational programs to serve the wide variety of students' needs, served 40,635 persons in secondary nonoffice programs — 53 percent of the total nonoffice occupational enrollments in these areas.

SECONDARY OCCUPATIONAL EDUCATION ENROLLMENTS OUTSIDE THE SIX MAJOR CITIES

Percent of Enrollment in Each Program Area Served by BOCES and by Local Educational Agencies (LEA)



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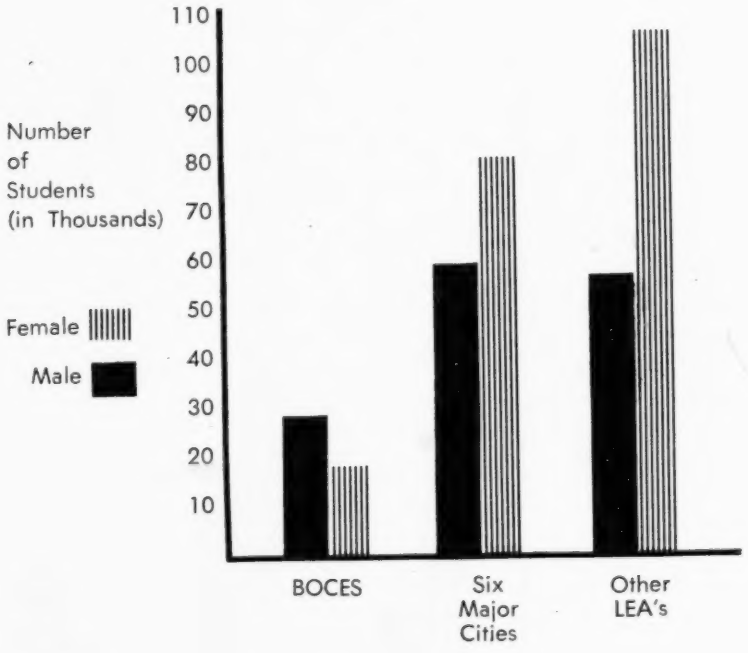
59 PERCENT OF SECONDARY OCCUPATIONAL EDUCATION STUDENTS WERE FEMALE . . .

- 205,131 females were served in secondary occupational education programs.
  144,851 males were served in secondary occupational education programs.
- Over 79 percent of all females served at the secondary level were enrolled in Business and Office programs.
- 62 percent of the secondary occupational education students served in BOCES occupational centers were male.

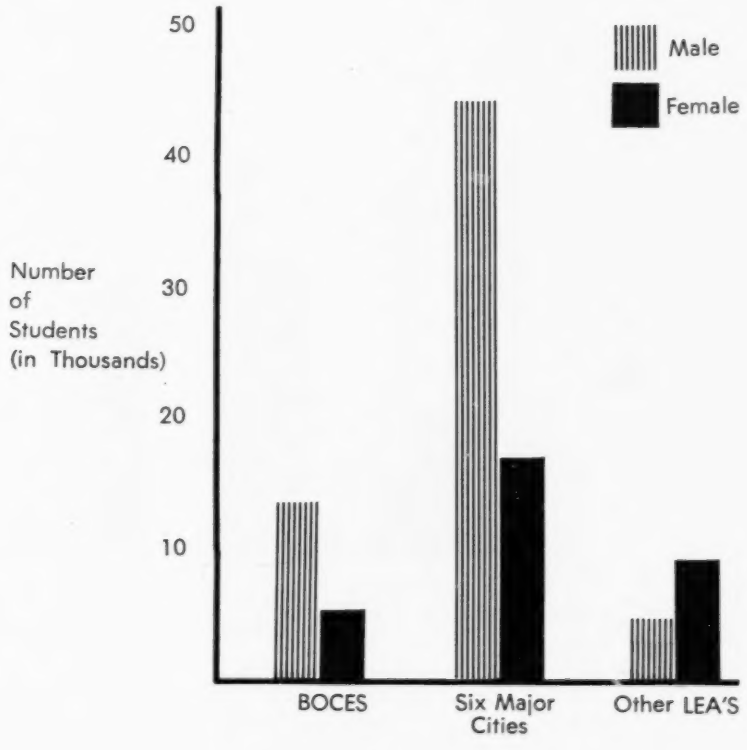
SECONDARY OCCUPATIONAL EDUCATION ENROLLMENTS BY SEX



BUT 65 PERCENT OF ADULT OCCUPATIONAL EDUCATION STUDENTS ENROLLED IN PUBLIC SCHOOLS AND AREA CENTERS WERE MALE . . .

- 33,474 females were served in adult occupational education programs.
  61,691 males were served in adult occupational education programs.
- Nearly all apprentices receiving related instruction were male.
- 63 percent of adult supplementary students were male.
- About half of the adult preparatory students were male.
- 72 percent of adult students in the Six Major Cities were male.

ADULT OCCUPATIONAL EDUCATION ENROLLMENTS BY SEX



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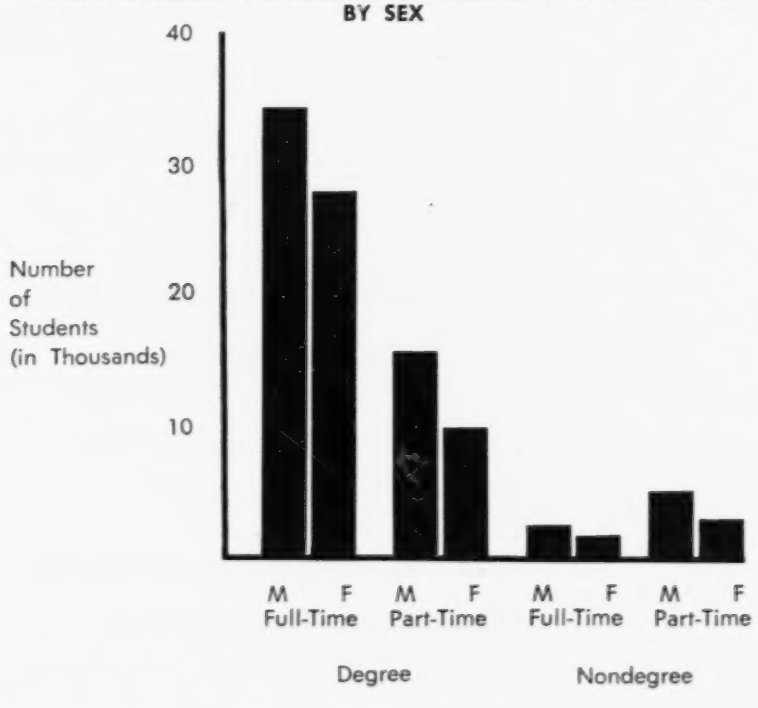
AND THE MAJORITY OF POST-SECONDARY OCCUPATIONAL EDUCATION STUDENTS WERE MALE —

- 37,678 females were served in post-secondary degree occupational education programs.
  48,561 males were served in post-secondary degree occupational education programs.
  56 percent of post-secondary degree occupational education students were male.
- 55 percent of full-time degree post-secondary occupational education students were male.
  59 percent of part-time degree post-secondary occupational education students were male.
- 66 percent of post-secondary nondegree students (including those at urban centers) were male.

POST-SECONDARY OCCUPATIONAL EDUCATION ENROLLMENTS BY SEX



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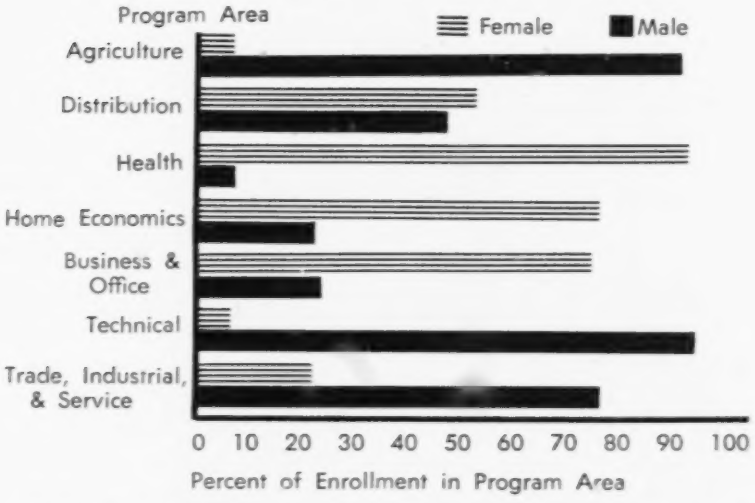
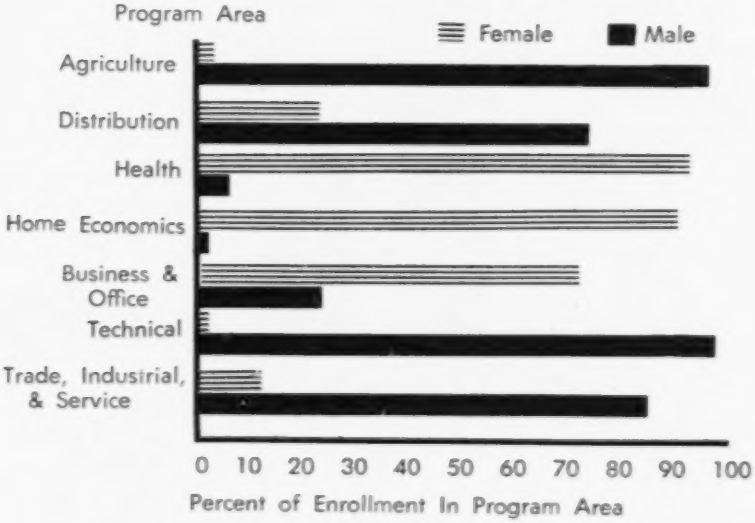
AT THE SECONDARY LEVEL, IN SIX OF THE SEVEN PROGRAM AREAS, AT LEAST THREE-QUARTERS OF THE ENROLLMENT WAS OF ONE SEX . . .



AT THE ADULT LEVEL, IN ALL OF THE SEVEN PROGRAM AREAS, AT LEAST THREE-QUARTERS OF THE ENROLLMENT WAS OF ONE SEX . . .



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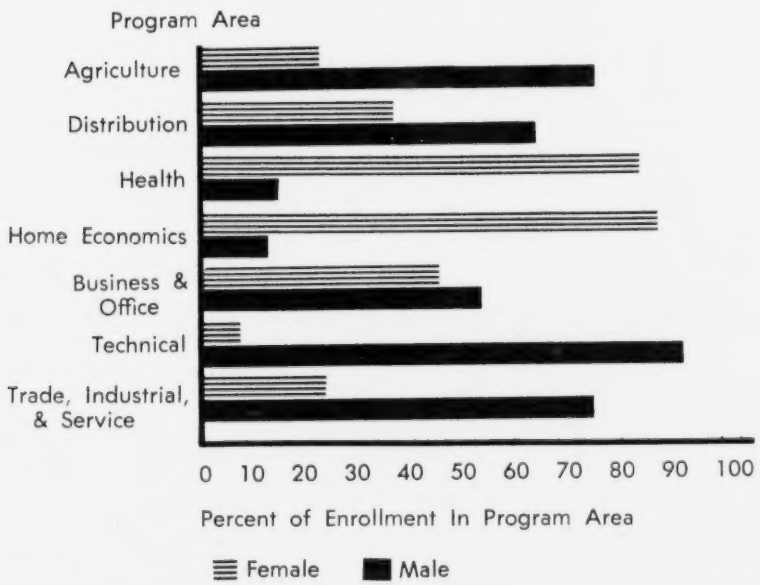
AT THE POST-SECONDARY LEVEL, IN FULL-TIME DEGREE PROGRAMS, ENROLLMENTS IN SIX OF THE SEVEN PROGRAM AREAS WERE MORE BALANCED BETWEEN MALES AND FEMALES THAN AT EITHER THE SECONDARY OR ADULT LEVEL —



- Among nondegree and part-time programs, in a majority of the seven program areas, at least three-quarters of the enrollment was of one sex.

3017

27 PERCENT OF ALL SECONDARY OCCUPATIONAL EDUCATION STUDENTS WERE MEMBERS OF MINORITY GROUPS —

- 93,871 minority group members were served.
- 53,577 blacks were served.
  30,295 Spanish Surnamed Americans were served.
  6,253 American Indians were served.
  3,746 Orientals were served.
- The percentage of occupational education students who are members of each minority group is roughly proportional to the percentage of all public school students who are members of the same group.

DISTRIBUTION OF MINORITY GROUP MEMBERS IN SECONDARY OCCUPATIONAL EDUCATION AND IN THE PUBLIC SCHOOLS

	Percent of Secondary Occupational Education Enrollment	Percent of * Total Public School Enrollment (K-12)
Black	15.3%	15.5%
Spanish Surnamed American	8.7	9.1
American Indian and Oriental	2.9	.8
Total Minority Groups	26.9	25.4

* 1970–71 school year data.

3018

MOST MINORITY GROUP MEMBERS WERE SERVED IN THE SIX MAJOR CITIES —

- 86 percent of the minority group members enrolled in secondary occupational education programs were served in the Six Major Cities.
- 90 percent of the minority group members enrolled in adult occupational education programs were served in the Six Major Cities.
- The distribution of minority group enrollments in occupational education between the Six Major Cities and the rest of the State closely parallels the distribution of these groups in the public school enrollments and general population.

DISTRIBUTION OF MINORITY GROUP ENROLLMENTS AND POPULATION

Percent of Each Minority Group Enrollment Who Were Enrolled in the Six Major Cities

	Total All Minority Groups	Black	Spanish Surnamed American	American Indian and Oriental
Secondary Occ. Ed.	86.5%	82.4%	91.7%	92.3%
Adult Occ. Ed.	89.5	88.4	92.8	82.1
Public Schools *	86.5	83.0	93.9	70.3
Population **	N.A.	85.8	N.A.	N.A.

* 1970–71 school year.

** U.S. Department of Commerce, Bureau of the Census, *1970 Census of Population*, New York State, February 1971.

3019

MINORITY GROUPS WERE UNDERREPRESENTED IN PROGRAMS SERVING APPRENTICES

- Only 11 percent of the apprentices receiving related instruction were members of minority groups.
- Minority groups had a much higher participation rate in adult programs that provide supplementary instruction than in adult programs that provide preparatory instruction.

MINORITY GROUP ENROLLMENTS IN ADULT OCCUPATIONAL EDUCATION PROGRAMS

	PREPARATORY		SUPPLEMENTARY		APPRENTICE	
	No.	Percent* of Total Enrollment	No.	Percent* of Total Enrollment	No.	Percent* of Total Enrollment
All Adult Students	19,530	—	63,035	—	12,600	—
Black	2,655	13.6	13,964	22.2	1,032	8.2
Spanish Surnamed American	696	3.6	8,181	13.0	303	2.4
American Indian	88	.5	42	.1	26	.2
Oriental	32	.2	1,177	1.9	21	.2
All Minority Groups	3,471	17.8	23,364	37.1	1,382	11.0

* Detail may not add to total due to rounding.

3020

MINORITY GROUPS WERE UNDERREPRESENTED IN POST-SECONDARY OCCUPATIONAL EDUCATION PROGRAMS —

- Only 5.2 percent of all degree students at the public 2-year colleges were members of minority groups.
- Full-time degree programs enrolled a larger proportion of minority group members than part-time degree programs.

MINORITY GROUP STUDENTS ENROLLED AT PUBLIC 2-YEAR COLLEGES

Degree Programs

	FULL-TIME		PART-TIME		ALL DEGREE PROGRAMS	
	No.	Percent of Total Enrollment	No.	Percent of Total Enrollment	No.	Percent of Total Enrollment
All Students	60,506	—	25,733	—	86,239	—
Black	2,514	4.2%	435	1.7%	2,949	3.4%
Spanish Surnamed American	964	1.6	129	.5	1,093	1.3
American Indian	57	.1	4	*	61	.1
Oriental	306	.5	62	.2	368	.4
Total Minority Groups	3,841	6.4	630	2.4	4,471	5.2

* Less than .5%.

3021

MOST MINORITY GROUP STUDENTS SERVED IN OCCUPATIONAL EDUCATION WERE FEMALE —

- The proportion of females among black students was higher than among all occupational education students at every level of instruction.
- The proportion of females among Spanish Surnamed American students was higher than among all occupational education students at every level of instruction except secondary.
- American Indian enrollees were over 80 percent female at the secondary level, and over 90 percent male at the adult level. Post-secondary enrollments were fairly evenly balanced between males and females.
- Oriental enrollments, unlike the other minority groups, were mostly male at every level of instruction.

MINORITY GROUP ENROLLMENT BY SEX

Percent of Each Minority Group Enrollees Who Were Male and Female

	All Enrollees	Blacks	SSA	American Indian	Oriental
Secondary—					
Male	41%	39%	43%	18%	53%
Female	59	61	57	82	47
Adult—					
Male	65	51	52	91	81
Female	35	49	48	9	19
Post-Secondary (Full-Time Deg. Only)					
Male	55	41	35	49	58
Female	45	59	65	51	42

OVER 100,000 DISADVANTAGED PERSONS WERE SERVED IN OCCUPATIONAL EDUCATION PROGRAMS —

- 88,756 disadvantaged served in secondary programs.
  8,345 disadvantaged served in adult programs at public schools and area centers.
  3,966 disadvantaged served in post-secondary programs.
  2,636 disadvantaged served in part-time programs at public 2-year colleges and at urban centers.

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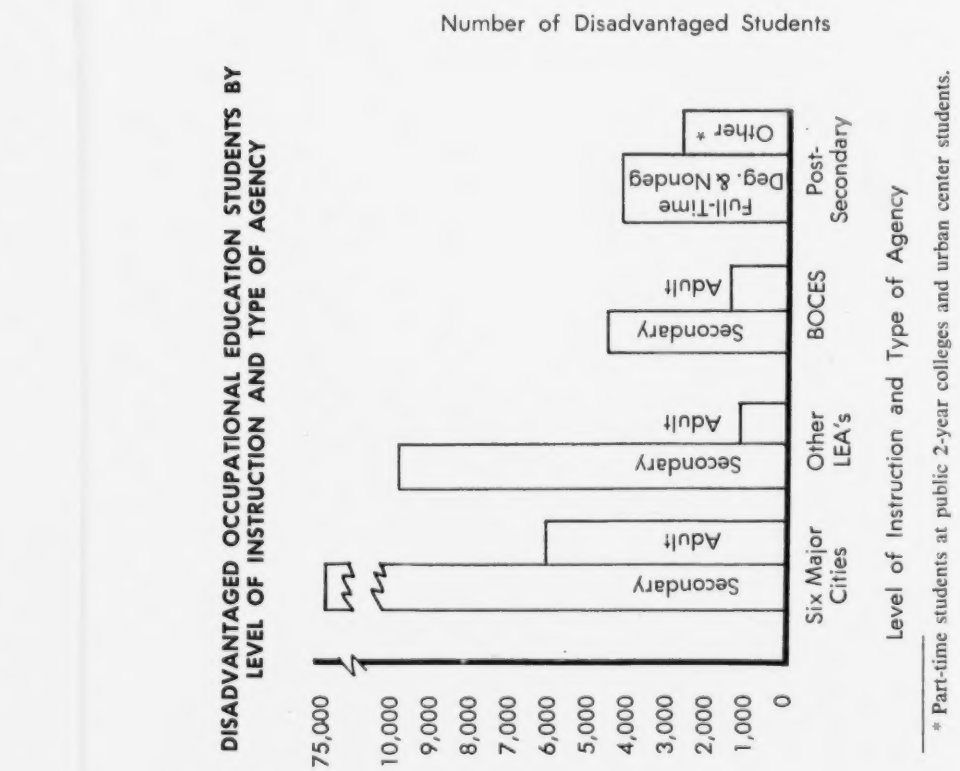
- Over 85 percent of all disadvantaged persons served in occupational education programs were served at the secondary level.
- 25 percent of secondary occupational education students were disadvantaged.
  9 percent of adult occupational education students were disadvantaged.
  6 percent of post-secondary (full-time degree) students were disadvantaged.
- 83 percent of the secondary disadvantaged were served in the Six Major Cities.
  71 percent of the adult disadvantaged were served in the Six Major Cities.

DISADVANTAGED OCCUPATIONAL EDUCATION STUDENTS BY LEVEL OF INSTRUCTION AND TYPE OF AGENCY



* Part-time students at public 2-year colleges and urban center students.

HEALTH PROGRAMS ENROLLED A LARGER PROPORTION OF DISADVANTAGED STUDENTS THAN ANY OTHER OCCUPATIONAL PROGRAM AREA —

- Over half the Health enrollments at the secondary level were disadvantaged.
- Over a third of the Health enrollments at the adult level were disadvantaged.

PERCENT OF ENROLLMENT IN EACH PROGRAM AREA WHO WERE DISADVANTAGED

Program Area	LEVEL		
	Secondary	Adult	Post-Secondary (Degree Full-Time)
All Programs	25%	9%	6%
Agriculture	16	3	2
Distribution	20	2	7
Health	51	37	7
Home Economics	19	17	6
Business and Office	25	15	9
Technical	36	6	4
Trade, Industrial, and Service	23	4	4

7,822 HANDICAPPED PERSONS WERE SERVED IN OCCUPATIONAL EDUCATION PROGRAMS —

- 7,012 secondary occupational education students were handicapped.
  211 adult occupational education students in the public schools and area centers were handicapped.
  569 post-secondary (full-time) students were handicapped.
  30 part-time post-secondary students were handicapped.
- Over 78 percent of the secondary handicapped enrolled in occupational programs outside the Six Major Cities were served in BOCES programs.
- 2 percent of the secondary occupational education students were handicapped, .9 percent of full-time degree students were handicapped, and only about .2 percent of adult students were handicapped.
- Handicapped students were distributed among the program areas in much the same way as general students — they were heavily concentrated in Business and Office programs and Trade, Industrial, and Service programs. Handicapped students, however, were more likely to select a Trade, Industrial, and Service program and less likely to choose a Business and Office program than general students.

HANDICAPPED OCCUPATIONAL EDUCATION STUDENTS BY PROGRAM AREA AND LEVEL OF INSTRUCTION

			Post-Secondary	
	Secondary	Adult	Full-Time	Part-Time
Total	7,012	211	569	30
Agriculture	303	4	25	0
Distribution	322	3	60	3
Health	290	9	88	1
Home Economics	404	5	42	1
Business & Office	3,080	45	208	18
Technical	260	4	65	5
Trade, Industrial, and Service	2,353	141	81	2

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COOPERATIVE WORK EXPERIENCE PROGRAMS SERVED OVER 18,500 STUDENTS —

- 16,718 secondary occupational education students were served in cooperative programs.
- 1,802 post-secondary occupational education students were served in cooperative programs.

COOPERATIVE OCCUPATIONAL EDUCATION ENROLLMENTS BY TYPE OF AGENCY AND PROGRAM AREA

	Secondary				Post-Secondary
	Total	BOCES	Six Major Cities	Other LEA'S	
Total	16,718	1,264	7,122	8,332	1,802
Agriculture	234	39	115	80	—
Distribution	3,874	162	663	3,049	1,429
Health	573	74	423	76	4
Home Economics	338	40	—	298	—
Business & Office	8,323	210	4,605	3,508	91
Technical	563	164	395	4	278
Trade, Industrial, and Service	2,813	575	921	1,317	—

- Secondary students were more likely to participate in cooperative programs than post-secondary students (4.8 percent as opposed to 3.0 percent).
- BOCES students were less likely to participate in cooperative programs than students enrolled in local educational agencies (2.7 percent as opposed to 5.1 percent).

23026

DISADVANTAGED AND MINORITY GROUP MEMBERS WERE MOST LIKELY TO PARTICIPATE IN COOPERATIVE PROGRAMS —

- Secondary disadvantaged students were slightly more likely to participate in cooperative programs than general students; post-secondary disadvantaged students were much more likely to participate in cooperative programs than general students.
- At the secondary level, minority groups had a slightly higher participation rate in cooperative programs than in other programs.
- At the post-secondary level, about the same percentage of cooperative enrollments and regular enrollments were members of minority groups.

COOPERATIVE OCCUPATIONAL EDUCATION ENROLLMENTS
Percent of Total Enrollment Who Belonged to Each Type of Student Classification

	SECONDARY		POST-SECONDARY (Full-Time Degree)	
	All Enrollees	Cooperative Enrollees	All Enrollees	Cooperative Enrollees
Male	41%	40%	55%	50%
Female	59	60	45	50
Disadvantaged	25	28	6	14
Handicapped	2	4	1	*
All Minorities**	27	31	7	6
Black	15	17	4	4
Spanish Surnamed American	9	7	2	1
American Indian	2	5	*	*
Oriental	1	1	1	*

* Less than .5 of 1 percent.
** Detail may not add to total due to rounding.

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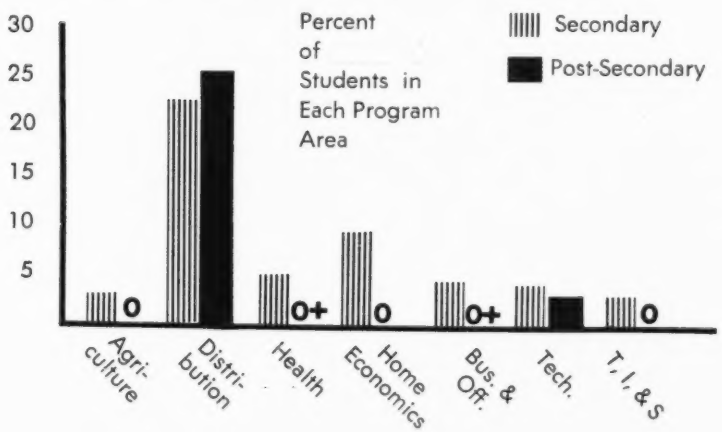
MOST COOPERATIVE WORK EXPERIENCE STUDENTS WERE ENROLLED IN BUSINESS AND OFFICE OR DISTRIBUTIVE PROGRAMS —

- Over 80 percent of post-secondary cooperative students were enrolled in Business and Office or Distributive programs.
- Nearly three-quarters of secondary cooperative students were enrolled in Business and Office or Distributive programs.
- Distributive programs enrolled the highest proportion of cooperative students.
  25 percent of post-secondary Distributive enrollments were cooperative.
  22 percent of secondary Distributive enrollments were cooperative.

PERCENT OF STUDENTS IN EACH PROGRAM AREA WHO PARTICIPATED IN COOPERATIVE PROGRAMS



- Despite the high enrollments in Business and Office and Distributive programs, cooperative programs enrolled only a slightly higher percentage of females than regular programs.

  At the secondary level, 59 percent of all students were female and 60 percent of cooperative students were female.

  At the post-secondary level, 45 percent of all students were female and 50 percent of cooperative students were female.

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VT 018 068

EXEMPLARY PROGRAMS AND PROJECTS IN THE STATE OF NEW MEXICO. 1971-72 ANNUAL REPORT.

NEW MEXICO STATE ADVISORY COUNCIL ON VOCATIONAL-TECHNICAL EDUCATION, SANTA FE.
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IDENTIFIERS - NEW MEXICO

ABSTRACT - FINDINGS, CONCLUSIONS, AND GENERAL RECOMMENDATIONS EXTENDED OPERATING EXEMPLARY PROGRAMS AND PROJECTS IN THE STATE OF NEW MEXICO ARE REPRESENTED IN THIS EVALUATIVE ANALYSIS. A PRODUCT OF THE STATE ADVISORY COUNCIL, THE REPORT ATTEMPTS TO POINT OUT IN SUMMARIZED VERSIONS THE HIGHLIGHTS OF EACH OF THE 8 EXISTING PROGRAMS WHICH INCLUDE: (1) THE INDUSTRIAL DEVELOPMENT TRAINING PROGRAM, (2) CAREER SELECTION EDUCATION PROGRAM, (3) VOCATIONAL GUIDANCE PROGRAM, (4) PRE-VOCATIONAL BUSINESS EDUCATION PROGRAM, (5) CAREER EDUCATION PILOT PROGRAM, (6) MINI-GRANT PROGRAM, (7) ALBUQUERQUE MINI-GRANT PROGRAM, AND (8) A TESTING PROGRAM TO PREDICT CAREER CHOICES. COMMENDATIONS WERE ACCORDED ALL OF THE PROJECTS, WITH SPECIAL RECOGNITION GIVEN THE CAREER AWARENESS PROGRAMS. (SN)

VT 018 068

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EDUCATION & WELFARE
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1971-1972 ANNUAL REPORT

EXEMPLARY PROGRAMS AND PROJECTS

STATE OF NEW MEXICO

Prepared By

New Mexico Advisory Council on
Vocational-Technical Education

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New Mexico Advisory Council on Vocational-Technical Education

Melvin A. McCutchan, chairman

Peter A. Eissele, director

June 30, 1972

Mr. James West, Director
Division of Vocational Education
State Department of Education
State Education Building
Santa Fe, New Mexico 87501

Dear Mr. West:

In response to your request that the State Advisory Council serve as a third party evaluator of the 1971-72 Exemplary Programs, I hereby submit to you our findings and conclusions. Such conclusions were drawn following a random sampling of on-site visitations and a careful analysis of each project report. Generalizations relating the performance outcomes to the program objectives dominate the report; however, an effort was made to highlight activities deemed exceptional by the Council staff.

The Council feels the returns exemplified in the innovative Career Awareness Programs, especially at the elementary level, far exceed the initial investment. Actually, the gains indicate a sound beginning to redirecting our approach toward Career Education. The State Division of Vocational Education should be highly commended on their project selection and support in terms of serving relevant needs of communities as well as the State through Exemplary (Part D) funds.

Yours truly,

M. A. McCutchan

M. A. McCutchan
Chairman--SAC

MAM:sjb

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PREFACE

The Vocational Education Act of 1963 as amended by Title I, Part D, of the Vocational Education Amendments of 1968 provides for the establishment of Exemplary Programs and Projects whose expressed purpose is "to stimulate, through Federal funding, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in post-secondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies." Programs initiated under Part D of the Act are further designed to broaden occupational aspirations and opportunities for youths with special emphasis give to those who have academic, socioeconomic, or other handicaps. Such programs may include among others:

1) Those designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations.

2) Programs or projects for students providing educational experiences through work during the school year or in the summer.

3) Programs or projects for intensive occupational guidance and counseling during the last years of school and for initial job placement.

4) Programs or projects designed to broaden or improve vocational education curricula.

5) Exchanges of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of this part, including manpower agencies and industry.

6) Programs or projects for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment.

7) Programs or projects at the secondary level to motivate and provide pre-professional preparation for potential teachers for vocational education.

In accordance with the provisions of the Act, the State of New Mexico requested and received funds to implement nine exemplary programs, four new and five continuing projects, for the 1971-72 school year. These programs were reviewed and evaluated according to the following criteria, to what extent:

1) Is the proposed program or project designed to meet the vocational education needs of disadvantaged youth?

2) Will the proposed program or project have an impact on reducing youth unemployment?

3) Will the proposed program or project contribute to the solution of important vocational education problems?

4) Does the proposed program or project promote cooperation between public education and manpower agencies?

5) Will the proposed program or project be integrated into the presently existing vocational program in the local school and/or State?

6) Does this proposed program or project meet the priority areas in vocational education specified in the long-range program plan and annual plan?

7) Are the personnel designated to carry out the proposed program or project adequate in number and competent for the proposed positions?

8) Are the cost estimates reasonable for the program or project proposed?

9) Are the procedures to be used in achieving the objectives appropriate, adequate and efficient?

10) Are the facilities, equipment and materials adequate to allow the proposed program or project to attain the objectives set forth?

11) Is the proposed program or project reasonably and substantially exemplary?

12) Does the proposed program or project make provision for the participation of students in private nonprofit schools, and will participation be genuine and meaningful?

13) Have effective policies and procedures been provided for, assuring that Federal funds to be used for proposed program will not be commingled with State or local funds?

14) Are the provisions made for evaluating the proposed program or project appropriate and adequate, providing for a reasonable degree of objectivity?

15) Are the local provisions for providing information to the State Board about the proposed program or project appropriate and adequate?

16) Does the proposed program or project reveal adequate planning by the local district and is there documentation showing the extent of involvement in planning implementation and appraising project activities of teachers, students, or other school personnel and others, including persons broadly representative of the vocational education resources of the public in the area to be served?

Selections were made by the Director of the State Division of Vocational Education with the aid and recommendations of the State Supervisors and an advisory committee and in conformity with Part I, section 6.13, of the New Mexico State Plan for Vocational Education.

The following Annual Report of those exemplary programs operating in the State of New Mexico during the 1971-72 was prepared by the New Mexico Advisory Council on Vocational-Technical Education. As these programs were initially assessed in terms of the criteria for selection, the Council's evaluation focused on the effectiveness of each program in meeting their proposed objectives.

INDUSTRIAL DEVELOPMENT TRAINING PROGRAM

Ampex Corporation
Rio Rancho Estates, New Mexico

Felco Industries
Rio Rancho Estates, New Mexico

Marvel Engineering
Mescalero Apache Reservation, New Mexico

Pecos Trail Jeans
Santa Fe, New Mexico

Program Coordinator: D. Richard Beck, State Supervisor
Industrial Development

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INDUSTRIAL DEVELOPMENT TRAINING PROGRAM

During the past five years, vocational education has enjoyed the luxury of rapid growth. Increased Federal funding through the Vocational Education Amendments of 1968 greatly expanded program offerings at all levels, however, many were in the traditional vein of vocational education. While statisticians and prognosticators continued to stress the dilemma of the potential abundance of persons trained in professions requiring a four year college degree and the projected shortage of persons preparing for careers not holding that requirement, vocational educators generally remained quiescent. Thus, public support has been slower in coming than might be expected. Nevertheless, as employment demands continued to substantiate the need for a broadened scope of involvement in vocational education, new programs designed to serve the pressing needs in their respective states were developed. One such critical concern in New Mexico focused on the lack of any State-supported effort that could train the unemployed population for jobs created through the expansion or relocation of industries new to the State. Community groups reacted favorably to a proposed State-wide program to supplement Federal support for such a purpose and in September of 1970 a two year exemplary pilot was initiated under the State Division of Vocational Education. In 1970-71, three unique training programs were developed which prepared 184 persons for newly created jobs -- the type of occupations not served in the standard vocational offerings. In addition, 75 persons received upgrading training for advancements. In 1971-72, the program, under the able management

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of Mr. Richard Beck, prepared 250 persons for four new firms offering permanent employment opportunities. In each case, the Industrial Development Training Program also served as a primary instrument in attracting the firm to the State. The four firms selected in 1971-72, or less than 20 per cent of those expressing a serious interest in the program, located in economically depressed areas having high unemployment rates. Each firm, without exception, employed in excess of 95 per cent of its work force from the immediate area.

A short-term program was developed at the Bernalillo Skill Center in Sandoval County to prepare 140 additional electronics assemblers for the Ampex Corporation. It essentially involved pre-employment training with the company assuming the cost of the subsequent on-the-job training. As a result of this effort, the skill center will be able to provide an on-going service to assure the availability of qualified applicants for Ampex as well as other electronic-related firms in the area.

Fifty persons were trained as machine operators for Pecos Trail Jeans, a textile production firm employing an initial work force of sixty-five to seventy-five persons in Santa Fe, New Mexico. Expansion plans include a similar size operation in Las Vegas, New Mexico by early fall. The latter community is an area of high unemployment with an extremely low economic base. The cost of this project was $10,000.

$7,800 was spent to train 20 Indians from the Mescalero Reservation as machine operators for Marvel Engineering, a filter production firm which recently relocated in New Mexico. The training again was in conjunction

with Federal funds (MOVE, JOBS) and provided an entire framework of preparation from work orientation to on-the-job experience.

Felco Industries, a jewelry manufacturing firm employing an initial total work force of 100, located in Rio Rancho Estates in Sandoval County. The firm used the Bernalillo Skill Center to train 40 people in various jewelry working occupations. $17,777 of industrial development training funds were granted for pre-employment training with manpower training programs such as SER, CEP, and WIN providing extensive funding for on-the-job-training.

In all, $38,000 was spent for the four projects with the average cost per trainee being $152. In turn, 450 jobs were created as a result of these companies locating in New Mexico. Thus, the average cost per job created was less than $100.

As the program grew in magnitude, it became apparent that it would effect greater and wider change than imagined. Communities and regions easily recognized the validity of relating job creation to the educational function and began to completely review community development plans in light of educational opportunities. This was especially true in rural areas. A new dialogue between vocational educators and various sectors of the population has resulted from this new relationship and, thus, has prompted unsolicited public endorsement of post-secondary school expansion as a catalyst for continued community development. Secondary schools in rapidly growing areas have begun to emphasize curriculum design outside the

existing service areas in order to serve the dynamic needs of today's industrial/business setting.

To sustain the program and develop an increased level of funding to accomodate the requests, the industrial developers joined the State Department of Education and the State Department of Development in successfully promoting passage of a bill to provide $250,000 to the Division of Vocational Education over a two-year period. The State's Board of Economic Development, which was given approval authority on requests, and the community leaders throughout the State have viewed this operation and subsequent legislation as a major step in enhancing the employment picture and overall economic condition of New Mexico.

CAREER SELECTION EDUCATION PROGRAM

Cloudcroft High School
Cloudcroft, New Mexico

Weed High School
Weed, New Mexico

Program Coordinator: Mrs. Mary Jo Clendenin, Counselor
Cloudcroft High School

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CAREER SELECTION EDUCATION PROGRAM

Student follow-up surveys administered by school officials from Cloudcroft and Weed High Schools indicated that many students were not prepared to make a career choice upon graduation and were unaware of the multiple occupational opportunities open to them. The majority of graduates interviewed expressed the need for a program that would provide exposure to and counseling in various career areas -- those not requiring as well as those requiring a Baccalaureate Degree. The size of the school populations and the teaching staffs available, however, did not justify offering a variety of technical-vocational courses. The Career Selection Education Program was thus designed to fulfill this need. It had as its objective to increase the students' capacity to make career decisions by realizing their abilities and limitations and by knowing, as empirically as possible, pertinent facts about numerous careers. Initially funded in 1970, the program was continued for the 1971-72 school year. Total cost of the program was $5,185. Combined Federal allocations equalled $2,100, $1,300 to Cloudcroft and $800 to Weed, with local funds absorbing the remainder.

The Career Selection Program was conducted at Cloudcroft High School and made available to the students of Weed High School one-half day per week through a share plan. It incorporated a Career Psychology course, offered as an elective to sophomores, juniors, and seniors, and individual career counseling. Mrs. Clendenin served in a dual capacity as instructor and counselor for the two schools.

The course consisted primarily of discussion sessions concerning careers, career selection, and personality development utilizing a basic psychology text, interest inventory tests, decision-making models, and the Western Small States School Project, Integrated Career Development Curriculum, as source materials. Class activities included traveling to Roswell Trade School and attending lectures given by speakers representing the following occupational fields: architecture, governmental services, the military, and the construction and computer industries. In addition, during one nine week term, students from Cloudcroft High School worked one hour per day without pay for various employers within the community. Those businesses cooperating in this effort included the grocery store, beauty salon, service station, newspaper, electric cooperative, sandwich shop, and the forest service. Career counseling was not restricted to those enrolled in the Career Psychology class but was open to any pupil desiring assistance. Seventy-eight students were served as a result of the total program -- forty-five through individual counseling and thirty-three through course instruction.

The degree to which students were able to successfully make an occupational decision as a result of the Career Selection Program cannot be determined until follow-up studies have been made of the graduates. The instructional materials and learning experiences incorporated in the program, however, provided pupils with the information necessary to strengthen their ability to choose a career field. The interest inventory tests and decision-making models enabled students to assess themselves and their occupational choices in a systemized manner. Career information was furnished through the field trip, guest speakers, counseling sessions, and through first-hand experience.

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Employment in the various community businesses had the additional effect of aiding Cloudcroft students in obtaining summer jobs.

Administrative and student response to the program was both favorable and enthusiastic; however, the limited time Mrs. Clendenin has to devote to career-oriented activities due to her other counseling and teaching duties and an extremely tight administrative and teaching budget preclude establishing it as an on-going program. School officials have submitted a proposal to the State Department of Education for the 1972-73 school year that would allow for continuation of the Career Psychology course and expansion of the career counseling services. The proposal provides for a full-time Career Guidance Counselor and Career Education Coordinator whose responsibilities would entail coordinating career education K-12, supervising independent occupational studies in selected areas, functioning as a placement agent, initiating in-service training for other staff members, conducting research related to student and community needs, and working with parents and other representatives of the community. Approval of this proposal would assure the program's continuation as a viable part of the curriculum.

VOCATIONAL GUIDANCE PROGRAM

Hobbs High School
Hobbs, New Mexico

Program Coordinator: Edward DeJarnet, Coordinator of Evaluation
Hobbs Municipal Schools

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VOCATIONAL GUIDANCE PROGRAM

Initiated in 1970-71 to expand and improve the existing guidance and counseling services, the Vocational Guidance Program conducted at Hobbs High School was continued in 1971-72 with greater emphasis on extending vocational guidance to as many elementary and secondary students as possible and providing occupational information by updating material and purchasing equipment conducive to career planning. Expenditures for the program totaled $16.050. Of this, $12,000 was provided by Federal funds and the remainder by local monies.

The Vocational Guidance Program was designed as a learning experience for both the faculty and students rather than as a specific course to be offered as part of the curriculum. Brochures, periodicals, and other publications containing occupational information were distributed among the administrators, teachers, and counselors to augment their knowledge of the various career fields. Supplementary materials were used as references to aid them in developing effective procedures for disseminating this data to the remainder of the school. The students, in turn, received career information through individual and group counseling sessions conducted by staff members which incorporated the following instructional techniques: films, slides and cassettes, and guest speakers. Due to increased public interest, many members of the community also became actively involved in the program. Local employers and employees were used for video tapes of job descriptions and interviewing methods. Additional businessmen

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furnished data concerning their respective occupations on a referral basis and participated in a Career Day, a question and answer session providing students direct contact with local employers, held for the sophomores, juniors, and seniors. Both activities allowed industry a valuable input into the program.

As of this evaluation, the Vocational Guidance Program had been formally implemented only at the high school level where it served 550 students during the 1971-72 school year -- 50 sophomores, 200 juniors, and 300 seniors. Interest in providing their students with such a program, however, has been generated in the lower levels. The films, slides, and cassettes developed by Hobbs High School have been employed by the junior high teachers in their classrooms and feedback from the staffs indicated a desire to expand their counseling services in that direction. Similarly, the elementary schools are currently involved in the initial stages of designing a career guidance program -- pre-planning and staff development.

The full import of the Vocational Guidance Program cannot be assessed until participating students have graduated and follow-up studies can provide answers to the following questions: How relevant was the program material in terms of the types of jobs students pursued after graduation? How many of those graduating were influenced in making a career selection by the counseling they received? Initial student responses, however, described the program as being interesting and informative as well as helpful in choosing a career and in applying for a job. As a result of this response and the support of the administration and faculty, the program will be continued and maintained as an integral part of the total course of study.

PRE-VOCATIONAL BUSINESS EDUCATION PROGRAM

Pecos Junior High School
Pecos, New Mexico

Program Coordinator: Mrs. Patricia Vigil, Instructor
Pecos Junior High School

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PRE-VOCATIONAL BUSINESS EDUCATION PROGRAM

The Pre-Vocational Business Education Program conducted at Pecos Junior High School during the 1971-72 school year constituted the second year of a proposed four year program initially developed and funded to meet the occupational needs of those students graduating from the Pecos School System. Approximately 75 per cent of these graduates do not enroll in further education but directly enter the labor force primarily in clerical positions. This program was designed to provide those students with a pre-vocational orientation in office occupations.

Approximately 160 students participated in the program which was offered as an elective to students in the seventh and eighth grades. Under the teaching direction of Mrs. Patricia Vigil, these pupils received instruction in filing, typing, shorthand, business english and etiquette, sales, basic bookkeping, and the care and operation of business machines. She utilized several teaching techniques including lesson drills, games, films, field trips, guest speakers, and, in the eighth grade, role playing. In addition, the eighth grade students spent one-half day working with staff members in various divisions of the State Department of Education.

All activities were implemented within an office simulation framework with the students rotating among the four business occupations represented -- receptionist, executive secretary, banker, and payroll clerk. While in each occupation, they learned the qualifications for and the responsibilities

of that position and practiced those skills necessary to successfully fulfill the responsibilities. Due to the shortage of machines, the class was divided so that one half was instructed on the machines while the others worked on lesson drills commensurate with their respective occupations. Except for the first two weeks of introduction and orientation, the students progressed by individual work schedules prepared by the teacher to meet their respective needs and achievement levels. In all, $8,681 was spent on the program. Federal allocations provided $8,500 with local funds furnishing the remainder.

The present program, encompassing the seventh and eighth grades, will be continued next school year with no major changes in content. Mrs. Vigil hopes to initiate a similar ninth grade course for the 1972-73 school year in order to provide students with a sequentially developed course of study. She will also be working during the summer with the senior high business teacher to aid in restructuring her curriculum to meet the needs of those pupils who have already been exposed to and have gained a degree of proficiency in typing and shorthand before entering high school.

As no one class has participated in the entire office education program as it now exists, the full import of the program cannot be evaluated at this time. A qualitative overview of the program, however, does indicate that it represents a significant addition to the previous course offerings. Students are being provided with a broadened, progressive curriculum which supplements the business courses, typing and shorthand, offered at the high school level. Included in the program's format were two basic components of career education -- awareness of the occupations available and

exploration in specific business-oriented careers -- in addition to the development of business skills. Guest speakers, films, and lesson drills, such as typing different job descriptions in lieu of standard text drills, exposed the students to a variety of occupations. Other films, field trips, role-playing, and hands-on experience related the needs, responsibilities, and qualifications of specific jobs in the clerical field. The games, lesson drills, and testing procedures all combined to increase the students' business skills so that, for example, one student could progress from typing zero words per minute to forty-six words per minute in one semester.

The existing Pre-Vocational Business Education Program was restricted only by the physical facilities and equipment available. The classroom size while adequate to serve the minimum needs of the classes did not allow for great flexibility or expansion in the course content. As a result of the response to this and other vocational programs, Mr. Herrera, principal of Pecos Junior High, supported plans for the construction of a new building to be erected adjacent to the current structure which will house all the vocationally oriented courses. Scheduled for completion during the 1972-73 school year, it will provide enlarged and improved facilities for the pre-vocational business program. Hopefully this will remedy the space problems that were prevalent this year. The equipment used in the program consisted of eight standard typewriters and three ten-key adding machines to accomodate approximately forty students per class. Additional electric typewriters and another adding machine should be made accessible to the program in order to better serve the needs of the students and the course.

Through her teaching techniques, Mrs. Vigil was able to make optimum use of the facilities available. In addition, she developed the majority of instructional materials employed in the classroom. These represent an extremely imaginative and flexible instrument that can easily be adapted to other areas and classrooms throughout the State.

CAREER EDUCATION PILOT PROGRAM

Taos Public Schools
Taos, New Mexico

Program Director: Paul Shelford

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CAREER EDUCATION PILOT PROGRAM

Approximately one year ago, the U.S. Commissioner of Education, Dr. Sidney P. Marland, Jr., appealed for the establishment of a new system in American Education -- one designed to provide every child with a genuine career choice and the intellectual and occupational skills needed to achieve it. Ideally, every studert would leave this educational system with an entry-level job skill and a knowledge of basic academic subjects sufficient to enable him entry into further education, either post-secondary occupational education or a university degree program, if he desired it. This concept, designated "Career Education", has gained the support of the President of the United States, and model programs are being initiated in each of the fifty States. In accordance with criteria established by the U.S. Office of Education, the State Department of Education selected Taos as the development, testing, and demonstration site for Career Education in New Mexico.

Taos is a rural, economically depressed community in which minority groups compose 86 per cent of the total population. Approximately 70 per cent of the students do not enroll in further education but directly enter the labor force upon leaving the school system. This economic, social, and educational structure is representative of numerous districts throughout the State. What is hoped to be transportable from the Taos pilot project is the method of initiating similar systems of Career Education in these other rural and semi-rural areas.

The program coordinators have named the pilot project Taoscore -- "CORE" being the acronym for Careers/Oriented/Relevant/Education. Initiated on January 3, 1972, Taoscore has as its long-term objectives:

1) to develop and implement a program at the elementary school level (K-6) designed to increase career awareness;

2) to improve the guidance and counseling services at all grade levels with special emphasis on career orientation and meaningful exploratory experiences for students at the junior high level;

3) to provide job preparation in occupational areas for grades 10 through 12 with special empahsis on the utilization of work experience and cooperative education opportunities, and

4) to establish a placement service to insure the placement of all existing students in either a job, a post-secondary occupational program, or a baccalaureate program.

In all, $96,852 was allocated for the program with Federal funds for Exemplary Programs and Projects providing $10,000 and other Federal, State, and local funds furnishing the remainder.

At the time of this evaluation, Taoscore was in the initial stages of program planning and orientation. Although it had completed only six of the eighteen months allotted, several significant achievements could already be noted. Of singular importance at the elementary level is the completion of a Career Education Matrix -- a 179 page model in the form of lesson plan suggestions for integrating Career Education concepts with the existing curriculums. It covers four of the basic disciplines -- Social Studies, Science, Math, and Language Arts. Each elementary teacher will receive a copy of the matrix and will be encouraged to use, modify, or discard the proposed lesson plans in accordance with his or her teaching

approach. In addition, a Career Awareness Committee composed of three teachers from Taos Elementary and one from each of the outlying elementary schools has been selected to review the existing curriculums and to evaluate revisions designed to incorporate career awareness experiences and the career development theme in the elementary grades. With the aid of the program director, the committee members have developed a comprehensive workshop plan and a working manual that will be distributed to all elementary teachers within the school system at a three-day inservice training workshop to be held on August 21, 22, and 23. Similar one-day workshops are scheduled for the junior and senior high school faculties, the former on August 24 and the latter on August 25. Teachers attending each of these three workshops will receive, in addition to the other materials, a comprehensive library index compiled for their respective levels. Library aides at the elementary, junior high, and senior high schools have catalogued the available books, both fiction and non-fiction, according to the fifteen occupational clusters and their respective sub-clusters. Twenty-three thousand job titles are represented in all. The lists will be a valuable asset to all faculty members and students in making and completing classroom assignments.

Two of the secondary teachers are currently engaged in developing course outlines for three classes that will be included in the 1972-73 curriculums. Two of these will be offered at the senior high level and one at the junior high level. Designed to produce student career awareness and sensitivity, the classes will initially serve approximately 120 students. A sustaining cooperative work experience program is also being established for eleventh and twelfth grade pupils that will operate in conjunction with the existing

vocational education program. Forty students are expected to participate in this supplemental program.

Concurrent with these other activities, the program director and the counseling staffs have been involved in the development of a career-oriented guidance program. They are currently engaged in establishing a career education guidance philosophy for all twelve grade levels and setting up objectives and means of implementation for group guidance sessions that will serve all the secondary students. A placement service is also being developed to handle both post-secondary school and job placements. In administering all the components of Taoscore, the program director has worked to bring together the already existing, though dissociated, elements of Career Education in the Taos schools to form the core of a new educational emphasis rather than superimposing a totally new curriculum upon the schools.

A final performance evaluation of the Taos Career Education Pilot Program cannot be made until after its termination on June 30, 1973; however, the program director's adherence to the timetables established by himself and the State Department of Education for program development and his able coordination of all the project's components indicate that at the completion of the pilot program the framework necessary for the administration of a successful Career Education program will be established in the Taos school system.

MINI-GRANT PROGRAM

Program Coordinator: Richard Harmeson, Assistant Director
Research Coordinating Unit
Division of Vocational Education
State Department of Education

MINI-GRANT PROGRAM

The Mini-Grant Program was established by the State Department of Education to initiate those exemplary projects that were of singular importance in meeting the specific educational needs of a school, community, or geographical area within the State and that required funding levels of $500 or less.

During 1971, the Albuquerque Public Schools requested and received a block grant to implement numerous mini-grant projects at the elementary level. These will be reviewed separately in the report. The three projects subsequently evaluated were chosen by the Council staff as being representative of the other mini-grants funded for the 1971-72 school year. A complete list of those selected can be found at the end of this section.

Crafts As A Vocation

Valley High School
Albuquerque, New Mexico
Program Coordinator: Mrs. Eva Noble, Instructor
Valley High School

This crafts program was designed to increase the general craft student's awareness of the vocational and avocational potentials for his particular talents through elementary training in a number of crafts. Under the direction of Mrs. Noble and Mr. Robert Henion, fifty students received instruction in printing and silk-screening, pottery, small sculptures weaving and jewelry-making. In addition to mastering the basic skills, the

students examined the simpler technical elements of these mediums, they developed a realistic idea of the fundamentals involved in setting up a studio and in marketing a finished product, and they became familiar with the various ways these crafts could become a vocation or a valuable asset to other occupations.

The crafts program represented a significant addition to the existing curriculum. It was both a forerunner to the comprehensive Career Education system proposed for Valley High School and the school's first art course to look at crafts as a vocation.

Small Gasoline Engines

Pojoaque High School
Pojoaque, New Mexico
Program Coordinator: Alfredo Martinez, Instructor
Pojoaque High School

Prior to the initiation of this mini-grant project, Pojoaque High School did not include a mechanics course as part of the total curriculum. As a result, this course was developed to offer students the opportunity to explore the field of mechanics as a career choice and to gain hands-on experience in the repair of small gasoline engines. Through lectures, demonstrations, and application, the students learned to identify and locate all the major working parts of an engine, to identify and use the proper tools and equipment needed for engine repair, and to disassemble a gasoline engine and subsequently reassemble it in working order. In addition, they acquired a general knowledge of other mechanical skills and of the employment outlook for auto mechanics both within the immediate area and throughout the State.

The value of the Small Gasoline Engine Program can be evidenced in two of its accomplishments. First, it fulfilled a school and student need for a basic mechanics course; and, secondly, it acted as a feeder program for the Espanola Vocational Technical School thus providing those class members interested in pursuing the field of mechanics as a career with a sequential training program not previously available.

Preparation For Child Care Related Occupations

Portales High School
Portales, New Mexico
Program Coordinator: Mrs. Margaret Fox, Instructor
Portales High School

This mini-grant project was developed and funded to supplement the Vocational Child Care Course already existing at Portales High School. Its objectives were two-fold: to broaden the students' concepts of child care related occupations and to prepare them for entry-level employment in home and institutional child care services. Group observation of public and private elementary school classes and individual work experience in various community training stations, private kindergartens, public grade schools, and special education classes combined to equip students with many of the skills necessary to satisfy the qualifications for a child care assistant. Two field trips provided a first-hand informative introduction to the variety of child care related occupations.

One immediate effect of the program was class recognition that the care of children was not just a local activity but an accessible future vocation. This new attitude subsequently resulted in the organization of the first HERO Chapter of Future Homemakers of America in New Mexico. Due to increased

student and public interest, a second high school class section in Vocational Child Care was added to the curriculum and a full-time kindergarten teacher was employed for the Child Care Training Center -- a facility constructed through Federal funds at Portales High School to augment the child care program. Finally, a curriculum guide with behavioral objectives and teaching aides was prepared for use in occupational training for child care assistants.

1971-1972 MINI-GRANT PROJECTS

	Title of Project	Coordinator/School	Federal Funds
1)	Establishment of an Orchard and Development of a Resource Unit	Nunn Las Cruces High School	$445.00
2)	Migration Patterns of Vocational Agriculture Graduates in New Mexico	Noland New Mexico State University	$425.00
3)	Occupational Opportunities for Off-Farm Agricultural Employment in Selected Areas of New Mexico	Noland New Mexico State University	$450.00
4)	Relationship of Student Characteristics and Policies in New Mexico FFA Participation	Noland New Mexico State University	$290.00
5)	A Teacher Resource Unit for Environmental Management	Noland New Mexico State University	$145.00
6)	Trouble-Shooting the Two-Stage Air Conditioner	Johnson Eastern New Mexico University	$350.00
7)	Pre-Vocational Exploration--A Mini-Course	Tabor Highland High School, Hobbs	$315.00
8)	Model Job Simulation of the Los Alamos Scientific Laboratory Individualized Approach	Jordan Los Alamos High School	$300.00
9)	Office Simulation: Activities of a Federal Credit Union	Wilson Santa Fe Vocational Technical School	$300.00
10)	Publication of Materials on Simulation	Heemsten University of New Mexico	$341.00
11)	Vocational Office Internship-Inservice Training for the Experienced Teacher	Giordano University of New Mexico	$301.00
12)	A Sound-Slide Presentation of Ceremonies Used in OEA	Wilson Santa Fe High School	$150.00

	Title of Project	Coordinator/School	Federal Funds
13)	The Development of Dictation Materials	McQueen University of New Mexico	$500.00
14)	Small Gasoline Engines	Martinez Pojoaque High School	$435.00
15)	Construction of a Small Building	Maestas Wagon Mound Public Schools	$400.00
16)	Crafts as a Vocation	Noble Valley High School, Albuquerque	$450.00
17)	Training Program in the Use of Manual Tools-Elementary	Dyche Edgewood Elementary School, Roswell	$300.00
18)	Woodworking, Sewing, Cooking	Rogers Santa Rita, Bayard	$250.00
19)	Family Life Conference	Olive Carlsbad Mid High School	$500.00
20)	Better Family Living Through Home Economics	Gallegos Coronado High School, Gallina	$425.00
21)	Marriage Enrichment Services	Bradsford Rio Grande High School, Albuquerque	$160.00
22)	Use of Visuals in Enriching Early Childhood Education	Bradsford Rio Grande High School, Albuquerque	$300.00
23)	Home Arts and Crafts-Something Old Something New	Turner Hagerman Municipal Schools	$300.00
24)	Preparation for Child-Care Related Occupations	Fox Portales High School	$425.00
25)	Semi-Modular-Industrial Arts Individualized Program	Estrada Tierra Amarilla Public Schools	$300.00
26)	Community Crafts	Coca Anton Chico Elementary School	$250.00
		TOTAL:	$8,807.00
27)	Albuquerque Mini-Grants	Lowery Albuquerque Public Schools	$19,000.00

ALBUQUERQUE MINI-GRANT PROGRAM

Albuquerque Public Schools
Albuquerque, New Mexico

Program Coordinator: Nelson Lowery, Director
Vocational Education
Albuquerque Public Schools

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ALBUQUERQUE MINI-GRANT PROGRAM

The Albuquerque Mini-Grant Program was designed to incorporate both the career development theme and career awareness experiences in the elementary grades through the implementation of individual projects. As a result of this program, thirty-seven projects conducted within twenty-four Albuquerque schools were initiated during the 1971-72 school year. A complete list of these immediately follows this evaluation.

Realizing that self-awareness would be one of the key factors in making career choices, the initial emphasis in the majority of projects was on self-understanding. Through experience-oriented classroom environments, students were provided numerous and diverse opportunities to discover new interests and skills. As they became aware of themselves, their interests and abilities, these students were able to more realistically assess their career potentials. The method of integrating career awareness experiences varied from project to project. Some explored a single career activity, while others related occupational information through either films, field trips, and guest speakers, or through hands-on experience. Several types of instructional settings were also employed including single teacher-centered classrooms; single open concept classrooms in which the students were responsible for their own education by allowing freedom for self-selection, self-pacing, and self-evaluation; combined classes involving whole grades or combinations of different grades in open situations; after hours elective courses; and Friday afternoon elective courses.

The success of the mini-grant projects far surpassed all expectations. Student achievements were observable in terms of the changes brought about in their attitudes toward school, work, and society and in their behavior patterns, self-concept, and personal habits as can be seen from the following examples:

1) Special education students, who formerly could only read simple, three-letter words, now read and follow instructions for film development including such words as "dilute", "developer", "agitate", and "continuously". (Armijo)

2) A junior high dropout returned to school so that he could take part in the program on small engine repair. (Wilson)

3) One student became so involved with the animals and their welfare that she secured a job as a junior volunteer for the Animal Humane Association. (Cochiti)

4) A boy considered to be "Student Trouble-maker No. 1" became so involved in music and science activities in his open concept classroom that he now appears to be a model of good behavior. (Sierra Vista)

5) A first grade student learning how to use a pottery wheel created a beautiful large bowl equal to any you might find in a crafts shop. (Apache)

6) Students who seemingly were unable to succeed in math class, were able to master the math concepts in order to learn drafting. They were consequently give math credit for work in the drafting course. (Esperanza)

To the students involved in the program, education suddenly seemed relevant to their own experiences. For example, they realized the importance of knowing how to work with fractions when confronted with following recipes in a cooking lab. As a result, the classes became more interesting and the students better disciplined and more self-motivated.

The mini-grant program also made a significant impact on the parents and the community. Increased public interest led many to become actively

involved in the school projects. Parents volunteered their time to discuss and teach their respective occupational skills, and businesses conducted tours through their facilities and frequently donated equipment needed by the school. Students and teachers not involved in the program expressed the desire to initiate similar projects during the 1972-73 school year. The principals unanimously supported the projects conducted within their schools and are currently making provisions to incorporate them in next year's curriculum.

Meetings were held at the conclusion of the school year to discuss the final results of the mini-grant program. The teachers cited the following problems that would need solutions:

1) Late disbursement of funds caused delay in purchasing supplies and implementing programs.

2) Lack of space, particularly for separate "noisy" rooms for sewing machines, woodworking, etc.

3) Lack of time for planning, for arranging field trips and speakers, for purchasing supplies, and for collecting materials.

4) Lack of funds for equipment and consumable supplies.

These problems, however, do not diminish the value of the Albuquerque mini-grant projects. They represent successful program models upon which a viable system of Career Education can be built and expanded.

1971-1972 ALBUQUERQUE MINI-GRANT PROJECTS

Title of Project	Coordinator/School	Federal Funds
Arts and Crafts		
1) Mini-Production, Management, and Distribution	Kimmell John Adams Junior High School	$500.00
2) Adventures in Art	Hillemeyer Armijo Elementary School	$500.00
3) Introduction to Pottery and Ceramics	Duran Armijo Elementary School	$500.00
4) A Way to Learn--A Way to Earn	Thompson Armijo Elementary School	$500.00
5) Photography--Hobby or Vocation	Stiebler Armijo Elementary School	$400.00
6) Mass Communication--Photography	Perry Barcelona Elementary School	$500.00
7) Vocational Leather Work	Eddy Baker Elementary School	$500.00
8) Vocational Areas of Fine Arts	Peterson Comanche Elementary School	$530.00
9) Development of Career Awareness Through an Art Program	Miera Duranes Elementary School	$500.00
10) A Career Program to Develop Arts and Crafts	Reel Lavaland Elementary School	$500.00
11) A Creative Art and Vocational Crafts Program	Phelphrey North Area Office	$456.00
12) Photography--A Method for Aesthetic Expression	Baker Stronghurst Elementary School	$250.00
Industrial Arts		
13) An Exploratory Program in Vocational Education for the Elementary School	Franklin Alamosa Elementary School	$500.00

	Title of Project	Coordinator/School	Federal Funds
14)	An Introduction to the Rudiments of Carpentry	Thompson Armijo Elementary School	$500.00
15)	Industrial Education in the Upper Elementary Grades	Chandler Baker Elementary School	$490.00
16)	Experimental Shop for the Development of Improved Student Attitudes and Abilities	Williams Chaparral Elementary School	$515.00
17)	Laboratory for Orientation to Safety and Equipment Utilization	Morgan Embudo Elementary School	$468.00
18)	Vocational Awareness Through Drafting	Johnson Esperanza School	$425.00
19)	Development in Reading Skills for Underachievers Through Improvement of Manual Dexterity	Salazar Larrazola School	$500.00
20)	Self-Help Project in Industrial Arts and Crafts	Merville McCollum Elementary School	$500.00
21)	Small Engine Repair	Larrañaga Wilson Junior High School	$615.00
	Career Awareness		
22)	A Vocational Exploration for Fourth Graders	Knight La Luz Elementary School	$394.00
	Ecology		
23)	Exploring Developing Careers in Ecology in New Mexico	Walter La Luz Elementary School	$480.00
	Home Economics		
24)	Career Exploration in Consumer Services	Schultz Baker Elementary School	$500.00
25)	Consumer Economics	Morgan Embudo Elementary School	$475.00
26)	Fifth Grade Career Awareness With Kindergarten Cross-Age Tutoring	Lujan Los Padillas Elementary School	$500.00

	Title of Project	Coordinator/School	Federal Funds
27)	Self-Help Project in Foods and Nutrition	Murray McCollum Elementary School	$500.00
Office Education			
28)	Typing in the World of Work	Pepmueller Baker Elementary School	$486.00
29)	Written and Oral Correspondence Improvement Through Typing	Morgan Embudo Elementary School	$447.00
Career Combinations			
31)	Exploring the World of Work	Apple Apache Elementary School	$491.00
32)	Career Awareness for Kindergarten Children Through The Use of Prop Boxes	Armijo Elementary School	$500.00
33)	Open Concept to Vocational Education	Cooper-Montoya Cochiti Elementary School	$500.00
34)	Future Career Awareness Directed Toward the World of Elementary Children	Blasi Matheson Park Elementary School	$500.00
			$272.00
35)	Elementary Career Oriented Counseling	Brown Mission Elementary School	
36)	Career Awareness	Moore Mitchell Elementary School	$500.00
37)	Building Pre-Vocational Attitudes and Literacy at the Elementary Level	Krogdahl-Wade Sierra Vista Elementary School	$500.00
		TOTAL:	$17,194.00

A TESTING PROGRAM TO PREDICT CAREER CHOICES

Albuquerque Public High Schools
Albuquerque, New Mexico

Program Coordinator: Nelson Lowery, Director
Vocational Education
Albuquerque Public Schools

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A TESTING PROGRAM TO PREDICT CAREER CHOICES

The testing program enacted in the Albuquerque Public Schools was initiated by Mrs. Hendrickson and Dr. Ihrig in response to statistics which indicated that a majority of students leave the Albuquerque school system each year without a salable skill. Many students, they felt, would be able to attain such a skill if the curriculum offerings were more relevant and the class schedules more flexible. Thus, this program was funded to determine student interests and career choices through the administration of the Ohio Vocational Interest Survey, to assess the curriculum studies students elect as related to existing schedules and offerings, and to establish guidelines for developing and implementing a course of study that would better serve the occupational needs and vocational class interests of the students. Program funding and expenditures equalled $1,000 to cover purchasing the scoring service for the survey.

The first phase of the program -- defining student choices -- has been completed. During the months of April and May, the Ohio Vocational Interest Survey was administered to approximately 1,400 sophomore students. This figure includes the entire sophomore class of Highland High School plus a random sampling of sophomores from the eight other Albuquerque public high schools: Albuquerque, Del Norte, El Dorado, Manzano, Rio Grande, Sandia, Valley, and West Mesa. Test results indicated that the predominate career choices were art, medicine, teaching, and social work, Auto mechanics, commerical art, forestry, office education, and dental assistant programs constituted the primary vocational courses pupils would like to take as part

of their high school course of study. School officials have reviewed these selections and are currently in the process of evaluating their existing curriculums, discussing the needed additions or deletions, and establishing guidelines for integrating these changes in the total curriculum. Implementation of those changes deemed both necessary and feasible is scheduled for the 1972-73 school year. Evaluation of the revised curriculums and the extent to which they served the occupational needs and vocational interests of the students cannot be made until that time.

In addition to curriculum planning, expanded career counseling programs have been initiated which are directed at both the sophomore students and their parents. Students who did not indicate a career choice or an interest in vocational classes comprised the target group for these programs. As many of these students as possible were individually counseled before the close of the school year as to their interests, goals, and the occupational areas open to them. Those not contacted will participate in similar meetings during the 1972-73 school year. The parents of these students were invited to group counseling sessions in which staff members discussed the purpose of the survey, the results, and subsequent follow-up and provided information on various career fields.

To evaluate the testing program with a performance analysis at this time would be invalid as the ultimate goal is a long-term one. Program coordinators, however, have made provisions to assure its continued progress.